

**RE-ANIMATING ANDEAN WORLDS:
KAMAYOO, THE POLITICS OF ‘CULTURALLY APPROPRIATE’ KNOWLEDGE
EXTENSION, AND ETHNODEVELOPMENT IN THE PERUVIAN ANDES**

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ABSTRACT

This dissertation positions the *kamayoq* of the Southern Peruvian Andes (Sierra Sur) within the context of globalized ethnodevelopment networks. Contemporary *kamayoq* are indigenous, community-based specialists who act as “transcultural bridges” within a “culturally appropriate” methodology of *campesino-a-campesino* (farmer-to-farmer) knowledge transfer. Building on the results of a follow-the-thing methodology (deployed across fourteen months of multi-sited ethnographic fieldwork), I use the case of the *kamayoq* to develop a critique of ethnodevelopment – a notion that encapsulates how development programmes put culture and cultural groups to work in order both to incorporate them within broader development trajectories, and to protect them from some of the negative effects of such participation. I draw on – and contribute to – relevant debates in political economy, political ecology, development studies, and Andean studies to make a series of empirical and theoretical contributions.

I conduct a Polanyian historical analysis of how the *kamayoq* have supported economic integration across different modes of production and forms of governance (since the fifteenth century). I develop a contemporary analysis of how ethnodevelopment programmes construct the *kamayoq* as ‘ethnic experts’ and ethno-entrepreneurial subjects within a new rural economy of Peru, thereby transforming a dynamic form of Andean learning-by-doing (*aprender hacer*) – as embodied by the *kamayoq* – into a form of ‘ethnic expertise’ on display (*saber hacer*). The recent government programme of certifying the competencies of the *kamayoq* according to national standards further acts as a kind of Foucauldian ethnodevelopmental *dispositif*, as it conducts the conduct of the *kamayoq*. Reflecting on these findings, I explore whether the *kamayoq* contribute to a uniquely Andean form of economic organization (‘*Andinidad*’; characterized by reciprocity, collectiveness, and communal ownership); I position this discussion in relation to Peruvian scholarship on decolonizing development. Finally, I develop a political economy-inflected ‘intimate ecology’ of the role the *kamayoq* play in connecting alpaca genetic reproduction networks in the Andes, thereby entering debates around multiple ontologies and Andean living worlds. I present the notion of

a 'vital economy' as a way of understanding the links between economic production, genetic reproduction, and the 're-wilding' of alpacas in order to maintain species vitality.

PREFACE

This dissertation is an original intellectual product of the author, Julian S. Yates. The field research was covered under UBC Behavioural Research Ethics Board certificate number H11-01029. The cartographic maps included in the introduction were compiled by the UBC geography department's cartography, Eric Leinberger, using additional data provided by the author. While the following publications emerged from the work presented in this dissertation, none have been reproduced *verbatim* here:

Yates, J. S., & Bakker, K. (2014). Debating the 'post-neoliberal turn' in Latin America. *Progress in Human Geography*, 38(1), 62 - 91. (This work does not appear directly in the thesis, but it informs the theoretical framework and some of the concluding remarks.)

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LIST OF ACRONYMS

AGRO RURAL	Programa de Desarrollo Productivo Agrario Rural (Programme for the Development of Rural Agriculture)
AMARKAS	Asociación Macro-Regional de los Kamayoq del Sur (Marco-Regional Association of the Kamayoq of the South)
CBES	Community-based extension systems
CETPRO	Centro de Educación Técnico Productiva (Centre for Technical Productive Education)
CIAR	Centro de Innovación y Agro-negocios Rurales (Centre for Rural Innovation and Agribusiness).
CONEACES	Consejo de Evaluación, Acreditación, y Certificación de la Calidad de la Educación Superior (Counsel for the Evaluation, Accreditation, and Certification of the Quality of Higher Education)
CONEAU	Consejo de Evaluación, Acreditación, y Certificación de la Calidad de Educación Universitaria (Counsel for the Evaluation, Accreditation, and Certification of the Quality of University Education)
DfID	Department for International Development (United Kingdom)
GRADE	Grupo de Análisis para el Desarrollo (Development Analysis Group)
IAA	Instituto para una Alternativa Agraria (Institute for Agrarian Alternatives)
IDB	Inter-American Development Bank
IFAD	International Fund for Agricultural Development
INEI	Instituto Nacional de Estadística e Informática (National Institute for Statistics and Informatics)
INIA	Instituto Nacional de Innovación Agraria (National Institute for Agrarian Innovation)
IPEBA	Instituto Peruano para la Evaluación, Acreditación, y Certificación de la Calidad de Educación Básica (Peruvian Institute for the Evaluation, Accreditation, and Certification of Basic Education)
ITDG	Intermediate Technology Development Group; know known internationally as Practical Action and in Latin America as Soluciones Prácticas

IVITA	Instituto Veterinario de Investigaciones Tropicales y de Altura (Veterinary institute for Tropical and Mountain Research)
NGO	Non-governmental organization
PB	Participatory budget
Plan Meriss	Plan de Mejoramiento de Riego en la Sierra y Selva (Plan for the improvement of Irrigation in the Highlands and Rainforests)
PRATEC	Proyecto Andino de Tecnologías Campesinas (Andean Project of Peasant Technologies)
PRODERM	Proyecto de Desarrollo Rural en Microregiones (Project of Rural Development in Microregions)
PTD	Participatory technology development
SINEACE	Sistema Nacional de Evaluación, Acreditación y Certificación de la Calidad Educativa (National System of Evaluation, Accreditation, and Certification of Educational Quality)
TA	Technical assistance
TCO	Tierras Comunitarias de Origen (Community Lands of Origin)

GLOSSARY

<i>Alcanzadores</i>	Literally ‘reachers’; small-scale wool collectors, who often barter with alpaca herders for their wool
<i>Alpaquero</i>	Alpaca herder
<i>Altiplano</i>	High-altitude Andean plains
<i>Aprender hacer</i>	Learning-by-doing
<i>Ayllu</i>	An organizational form that affiliates diverse human and nonhuman social groups, and which involves mutually reinforcing administrative, ritual, and economic practices. (Often simplistically equated to relations of kinship, and mistakenly translated as ‘community’.)
<i>Ayni</i>	A reciprocal exchange relation (symmetrical)
<i>Campesino</i>	Peasant; politically charged term used to refer to rural dwellers or country-folk; officially recognized in 1969 as a replacement for <i>Indio</i> .
<i>Chacra</i>	Agricultural fields (written as <i>chacara</i> in early colonial chronicles)
<i>Combi or colectivo</i>	A small mini-bus that operates on a stop-on-demand basis for local transportation
<i>Compañero</i>	Companion, comrade, fellow <i>campesino</i>
<i>Corvé</i>	Obligatory contribution of labour, usually by draft
<i>Escuela de Kamayoq</i>	Kamayoq School; the programme established by Soluciones Prácticas in 1996 to train <i>kamayoq</i> as peer-to-peer farmer educators
<i>Extensionistas rurales</i>	Rural extensionists
<i>Fujimorismo</i>	The period of aggressive neoliberalization associated with former Peruvian President Alberto Fujimori (1990-2000)
<i>Hato</i>	Livestock; herds
<i>Indios</i>	‘Indian’, with a historical-discursive connotation derived from the legal category imposed by the Spanish crown, and which equates to an insult. The politically correct term is <i>indígena</i> , and in 1969 the revolutionary government officially recognized the term <i>campesino</i> as a substitute.
<i>Kamay</i>	To be in charge/to give charge; to produce; to transform; to animate.
<i>Kamayoq</i> (contemporary)	A specialist in community-based extension (farmer-to-farmer knowledge exchange); from the verb ‘ <i>kamay</i> ’, adding the –oq suffix signals the ability to mobilise the verb.
<i>Kamayoq</i> (historic)	An officer or administrator; an individual charged with the responsibility to oversee others (including nonhumans).

<i>Kancha</i>	A traditional Andean home, consisting of three or more rectangular buildings organized as an enclosure with a central courtyard
<i>Mestizo</i>	Usually used to refer to a person of mixed indigenous and European descent; culturally however the term is deeply contested (see de la Cadena (2000) for a detailed account).
<i>Minka</i>	Reciprocal labour exchange, usually involving remuneration with goods and/or a meal. According to Mayer (2002), it can be reversible or irreversible (the latter of which he characterized as ‘asymmetrical reciprocity’.)
<i>Pachamama</i>	Mother Earth
<i>Paqocha</i>	The Quechua term for alpaca
<i>Programa Juntos</i>	<i>Programa Nacional de Apoyo Directo a los más Pobres</i> (National Programme for Direct Help to the Most Poor); conditional cash transfer (CCT) scheme established in 2005 by Supreme Decree and governed by Ley N° 29792 and the Ministry of Development and Social Inclusion
<i>Promotores pecuarios</i>	Livestock promoters
<i>Puna</i>	Pastureland land at altitudes of more than 3,800 metres above sea level
<i>Rescatistas</i>	Literally ‘rescuers’; they accumulate wool by purchasing from <i>alcanzadores</i> on a regional basis, before selling wool in medium to large quantities to alpaca enterprises, via business representatives of the enterprises.
<i>Runa</i>	People
<i>Saber hacer</i>	To know how-to-do
<i>Soluciones Prácticas</i>	The autonomous Latin American arm (based in Lima) of the UK-based international NGO Practical Action (formerly ITDG). Political economist E Fritz Schumacher founded the NGO in 1966 to help develop and distribute ‘appropriate technologies’ for the alleviation of poverty in largely rural areas of the global South. The regional offices are run autonomously.
<i>Sumak kawsay</i>	A place-based relational ontology, or cosmovision, that regulates exchanges between people and their environment, human values, intercultural practices, and visions of the future; the foundation for relationships of solidarity based on diversity, equity, self-management, ecological balance, and economic equality.
<i>Taller</i>	Workshop
<i>Trocha</i>	Dirt road

Trueque
Sierra Sur
Yachay
Yachachiq

Barter
Southern Highlands
Glossed as knowledge
Teacher, usually with an emphasis on practical demonstration; from the verb '*yachay*', to know.

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ONE

APRENDER HACER IN THE ANDES

In this dissertation, I conduct an analysis of contemporary *kamayoq*: peer-to-peer practical educators in remote communities of Peru's Southern Andes (Sierra Sur), working to enhance agricultural production techniques such as irrigation, animal husbandry and breeding, and crop cultivation.¹ The origins of *kamayoq* lie in Pre-Inka pastoral societies; under the Inka the *kamayoq* were internalized as a cadre of civil servants, but their influence waned under Spanish colonial rule. Since the 1980s, non-governmental organizations (NGOs) have worked to discursively revitalize and practically re-implement *kamayoq* within community-based systems of farmer-to-farmer (*campesino-a-campesino*) knowledge extension, particularly in the wake of the roll-back of state services in rural areas.

In 2010, having repositioned itself as an agent of social innovation, the Peruvian state began the process of reincorporating the *kamayoq* into state structures of rural development, with its launch of a pilot project for formally certifying *kamayoq* within a nationalized framework of professionalizing technical extension agents (*extensionistas*) and rural promoters (*promotores rurales*).² This reintegration of the *kamayoq* within formalized structures of governing resources and development in the Andes was symbolically inaugurated in April 2013 at meeting held in the Congreso de la República del Perú. Peruvian congressman, Daniel Mora, called on experts to present – to state policy-makers and key players in civil society – the case for expanding the formal certification of *kamayoq* and other rural promoters.

¹ Throughout the thesis, I use the modern Quechua spelling of *kamayoq*, in line with de la Torre (2004) and Canziani (2012), which can also be written *kama'yuk*. In early colonial chronicles, the term often appears as 'camayoc', or simply as 'camayu', 'camayo', or 'camaya' (see: Betanzos, 1996; Cerrón-Palomino, 2006; de Cieza de León, 2005; de la Vega, 1609; Guaman Poma De Ayala, 1615/1616). For more on information on variations according to dialect, see Adelaar and Muysken (2004).

² 'Rural promoters' is a generic term used to refer to farmer-trainers operating within the *campesino-a-campesino* model. *Kamayoq* reflect a particular historically-constituted and culturally contextual form of rural promoter, confined largely to the Sierra Sur

This practical re-insertion of *kamayoyq* into formalized structures of environmental governance seems to have fulfilled the symbolic, discursive, and practical re-institutionalization of the phenomenon.

In this dissertation, I analyze this contemporary revival of the *kamayoyq* phenomenon, focusing mostly on the period from 1986 to 2013, but supported by a historical analysis of the period 1450–1700. I argue that the dynamic form of learning-by-doing (*aprender hacer*) historically embodied by the *kamayoyq* has been transformed into a ‘culturally appropriate’ form of ‘ethnic expertise’ on display (*saber hacer*). Moreover, I assert that this ethnic expertise is increasingly put to work as a ‘transcultural bridge’ within what the Peruvian scholar of indigenous movements, María Elena García (2005a), describes as the zones of engagement associated with multi-cultural development politics.³ I therefore argue that the *kamayoyq* phenomenon internalises the tensions associated with the unfolding of ‘ethnodevelopment’. I conceptualize ethnodevelopment (discussed in detail in chapter two) as a particular articulation of the multi-scalar networks of a globalized development constellation, which seeks to put culture and ethnicity to work in order to preserve its own function.⁴ Deploying the concept of ethnodevelopment allows me to argue that the *kamayoyq* embody a tension between, on the one hand, a re-affirmation of Andean culture and forms of socio-economic organization, and on the other hand, the extension deeper into the Andes of the very Westernized forms of neoliberal multicultural and capitalist development that such processes of cultural re-affirmation are supposed to challenge. In subsequent chapters, I argue that these two interrelated processes – of socio-cultural and economic affirmation, and neoliberalization – are mutually constituted.

My account of the contemporary role of *kamayoyq* largely revolves around their intersection with the rural development programmes of the NGO Soluciones Prácticas – the

³ In an interview (July 2011), Carlos de la Torre used the term “culturally appropriate” to describe the *campesino-a-campesino* model of knowledge extension, and in his book depicted *kamayoyq* as “transcultural bridges” (de la Torre Postigo, 2004, p. 28). Having worked with the *kamayoyq* for over three decades, Carlos was dubbed by one *kamayoyq* as the “godfather” of the *Kamayoyq* School, which he helped to establish as a training programme operating out of the town of Sicuani (Cusco).

⁴ My use of ‘globalized’ over ‘global’ throughout the thesis is intentional. It follows work on globalized or globalizing agricultural production, which “refers not to the entirety of agriculture across the world but a transnational space of corporate agriculture and food relations integrated by commodity circuits” (Le Heron, 2009, p. 558). Globalized development therefore refers to the interconnected circuitry of development, rather than to development as an imagined global ‘thing’.

Latin American arm of the UK-based international NGO Practical Action.⁵ My own initial encounter with the concept of the *kamayoq* began when I worked for the UK head office of Practical Action in 2004 – a period when the NGO was gaining international recognition for its participatory, farmer-to-farmer model of development. The *kamayoq* fit within this model as a culturally contextualized form, and for the past three decades Soluciones Prácticas has been at the forefront of establishing the *kamayoq* as a network of peer-to-peer rural extension agents.

This overall approach reflects the influence of the organization's founder, Fritz E. Schumacher (1911–1977) – a German-born, British political economist who gained recognition with a series of popular critiques of large-scale, mechanistic capitalist development. The solution to the capitalist problem of production, as he put it, lay in a form of a re-arrangement of social structures according to a networking of small-scale, semi-autonomous associations of production, capable of stimulating a collective solution through co-operation and horizontal organization (Schumacher, 1973). Given that the *kamayoq* link horizontally across the Andes to enhance knowledge and production techniques collectively, could they – and the peer-to-peer system in which they operate – reflect the culturally contextual form of horizontal organization promoted by Schumacher?

Addressing this question – as I do in this dissertation – only tells part of the story of the *kamayoq*. The contemporary significance of the *kamayoq* does largely revolve around a network of NGOs, within which Soluciones Prácticas is at the centre. However, prior to the arrival of the NGO programmes in the 1980s, interest in the *kamayoq* began with the influence of Andean agronomist Toribio Quispe Jallo, who was particularly influential in the field of community-based governance of irrigation and was instrumental in establishing a network of

⁵ The NGO was originally founded in 1966 as Intermediate Technology, before evolving into the Intermediate Technology Development Group, and in 2005 undergoing further re-branding to become Practical Action. Practical Action focuses on the role of 'appropriate technologies' in alleviating poverty; that is, on purposeful technologies that are suited to the needs and capacities of populations engaged in labour-intensive production with minimal capital investments. The regional offices of Practical Action are run autonomously, each co-ordinating the programmes of other smaller project offices; the regional office in Lima co-ordinates programmes that are implemented by project offices in select intervention areas of Peru and Bolivia.

famer-trainers.⁶ To some extent, Quispe's outlook also reflected the perspectives on decolonizing Andean development that are promoted by Peruvian organizations such as PRATEC (the Andean Project of Peasant Technologies) and IAA (the Institute for Agrarian Alternatives) (e.g. PRATEC, 1998) – organizations and perspectives that I explore in detail in later chapters. In contrast to PRATEC's anti-Imperial approach, however, he worked alongside government and non-government programmes of both national and international origin in order to entrench his visions of sustainable development and the revival of Andean cultural ecologies. Quispe's approach was therefore combined with the 'technical extension' programmes of NGOs such as Soluciones Prácticas to produce the *kamayoq* model of "campesino-a-campesino technical extension".⁷

By following the *kamayoq* as a phenomenon within this context, I explore their roles as co-constitutors of rural development, raising questions around the degree to which they offer a 'culturally appropriate' form of organising development relations. I uncover how the *kamayoq* affect flows of knowledge, how they fit into broader governance mechanisms, whether they help to establish forms of social organization that may challenge top-down or market-oriented forms of imposing development on rural areas, whether the forms of knowledge they promote meet the de-colonial aspirations of organizations such as PRATEC, and whether their 'intimacy' with livestock produces uniquely Andean human-nonhuman interactions and forms of agrarian development.

This dissertation is therefore about the production and reproduction of environmental knowledge, as articulated according to the phenomenon of the *kamayoq* and within the context of the globalizing paradigm of ethnodevelopment. The dissertation is not about the political production of (individual) indigenous subjectivities – a theme best left to Andean scholars capable of speaking from experience. I do not, therefore, seek to define the *kamayoq*

⁶ Toribio Quispe was unable to witness the advancement of his farmer-trainer model. In 2000, he died in a car accident on his way to Cusco airport, from where he was due to fly to Kenya in order to present at the Global Biodiversity Forum and participate in activities related to the 5th Conference of the Parties.

⁷ I use the term "campesino-a-campesino technical extension" to refer to horizontally organized programmes of peer-to-peer knowledge exchange that simultaneously build on long cultural histories in the Andes, and incorporate these histories into a broader, arguably Western development paradigm. 'Technical extension', in this context, is used more-or-less synonymously with 'agricultural extension' or 'technical knowledge extension'. It is designed to perform the function of agricultural extension services, such as technical training, that have historically been provided by the state (Coello, Ita, & Elliot, 2006a; Morgan, 2002; Ortiz, 2006).

according to imaginaries of indigeneity, and neither do I seek to define what it means to be indigenous by drawing on *kamayoq* practices. I use the term indigenous in a broad sense, more-or-less in line with the ILO's Convention 169, but I do not seek to impose categorical distinctions.⁸ I regard non-categorical forms of self-identification according to multiple lines of identity formation to be more important in the dynamic process of shaping subjectivities. *Kamayoq* do not define what it is to be indigenous in the Andes, but rather illustrate that individuals, groups, and social practices move in and out of different categorizations (such as indigenous, *campesino*, *kamayoq*, etc.) according to their relations with broader political-material processes. It is these relations – between the *kamayoq* and broader political and material processes – that are of principle concern in this dissertation. We need these critical, reflexive, and temporal analyses of historically embedded forms of social practice if they are to be mobilized in effective ways for enhancing indigenous representation, knowledge production, and autonomous organization in ways that do not simply resort to difference making.

I do not, therefore, address issues of individual subject formation according to pre-determined, and fixed definitions of Andean indigeneity. Neither do I attempt to 'speak for' the *kamayoq*, which would simply impose my own voice upon them (Spivak, 1999). Nor do I intend to create a 'snapshot' of what it is like or what it means to be a *kamayoq*. This dissertation is a work of positioning the *kamayoq* phenomenon into broader political-economic and cultural ebbs and flows; from the outset, the research project was one of exploring the impact of the revival of the *kamayoq* as a rural development phenomenon. In contrast to other popularized indigenous concepts and practices, the *kamayoq* did not emerge as part of a broader political movement in Peru; rather, their contemporary form is largely a product of a contextual coming together of a variety of influences attempting to re-build Andean forms of knowledge production and exchange for practical livelihood improvements. I do not, therefore, position the *kamayoq* in relation to indigenous movements, which – as I explain in later chapters – have not taken a form in Peru similar to that in neighbouring Bolivia or Ecuador. The dissertation is therefore my reading of this context and of the contemporary effects of re-

⁸ While ILO 169 did not define who are indigenous peoples, it does provide a framework with which groups can *self-identify* as indigenous, drawing on criteria such as: traditional life-styles; distinct cultural practices; the existence of endogenous forms of social organization, customs, laws, and political institutions; and, historical continuity (often in a given spatial area).

institutionalizing the *kamayoq*. Rather than *define* subject positions, I follow Shaylih Muehlmann in attempting to explain “how certain subject positions are *taken up* in ways that resonate with wider political and ideological trends and become intelligible in relation to them” (Muehlmann, 2013, p. 78, emphasis added). I attempt to explain how the agency of the *kamayoq* is articulated within broader contexts of rural development. Rather than discuss individual subject *formation*, I explore the cultural and institutional components of political *representation* (Lucero, 2008).

For the remainder of the introduction, I establish the context of my investigation. First, I explain the places and methodologies that shaped my research into the development constellation within which the *kamayoq* now operate, before outlining the political and socio-economic context of these places. I then introduce the scholarly context by setting up my use of the term ‘ethnodevelopment’ and how I complement the ethnodevelopment paradigm with Peruvian de-colonial scholarship. I end the introduction by clarifying the structure of my argument throughout the dissertation, which hinges on four propositions about the narrative of the *kamayoq* and its framing within the lens of ethnodevelopment.

The spaces, places, and methods of a networked ethnography of the *kamayoq*

The majority of my ethnographic work was conducted in the provinces of Canas in Cusco, and Antabamba and Aymaraes in Apurímac (see figures 1-3). The dispersed nature of households in these areas means that they range between 3,500 and 5,600 metres above sea level, spanning at least two production zones: high altitude alpaca herding; and mixed production systems in the valleys and lower slopes. The latter is a relatively productive zone, with soils suited to a variety of crops and good pastures for livestock. Access to water sources and irrigation remains problematic but is sufficient to support medium-sized herds (e.g. 10-30 cattle) and reliable, continuous crop production. In Canas (Cusco), these areas of mixed production are characterized by rolling valleys of often-sodden pastureland, which does not aid in irrigation but rather contributes to the spread of diseases amongst livestock. Nonetheless, livelihoods in Canas (Cusco) revolve around livestock rearing (of alpacas, llamas, cattle, guinea-pigs (*cuyes*), and sheep), small-scale agriculture (such as growing potatoes and typical Andean grains, including quinoa), the production of agricultural commodities for subsistence and retail in local markets (such as cheese and yogurt from cows milk, dried alpaca meat

known as charqui, and leather (*cuero*)), and some supplementary income-generating activities, such as weaving alpaca wool and cotton-based products (see chapter three for part of the history behind the importance of skilled weaving and its outputs). Income levels in the area remain extremely low (as I illustrate in the next section), as the majority of households rely on subsistence and the reciprocal exchange of goods and labour, supplemented by only small amounts of commercial exchange.

In Apurímac, livelihoods are often constrained to high-altitude alpaca herding in the *puna*. On the steep rocky slopes, soils are poor and climatic conditions prevent the raising of livestock other than camelids (alpacas and llamas). Households in Apurímac are considerably more remote than those in Cusco, given the nature of the terrain: steep, rocky slopes that descend rapidly to fast-flowing rivers in the valley bottoms, meaning that travelling between valleys is time consuming, strenuous, and potentially dangerous (see **Figure 4** in chapter two). In contrast to Cusco, where walking, motorbike, and bicycle are common modes of individual transit, in Apurímac the majority of campesinos continue to travel by horseback in order to safely and relatively rapidly navigate the difficult terrain. This terrain, in combination with local and extra-local political-economic factors, has shaped the ways in which campesinos organise socio-economically and participate politically. As I explain in chapters four and six, some stark differences can be observed in this regard between Cusco and Apurímac.

In addition to these challenging spaces, I spent time in towns and cities such as Lima, Cusco, Abancay, and Sicuani, where I interacted with various key informants and attended various ceremonial events, discussions, and conferences. I also visited alpaca research stations in remote areas of Cusco and Puno (see Figure 2), and in order to compare the experience of the *kamayoq* in the Sierra Sur to that of the more generically titled ‘rural extensionists’ in the north, I visited various extensionists, government institutes, and NGOs in the northern department of Cajamarca. This combination of locations points to the necessity of immersing myself in the networked flows of knowledge that underpin the contemporary form of the *kamayoq* – a notion that I expand upon in chapter two.



Figure 1 Map of research departments and provinces (cartography by Eric Leinberger; additional data provided by author)

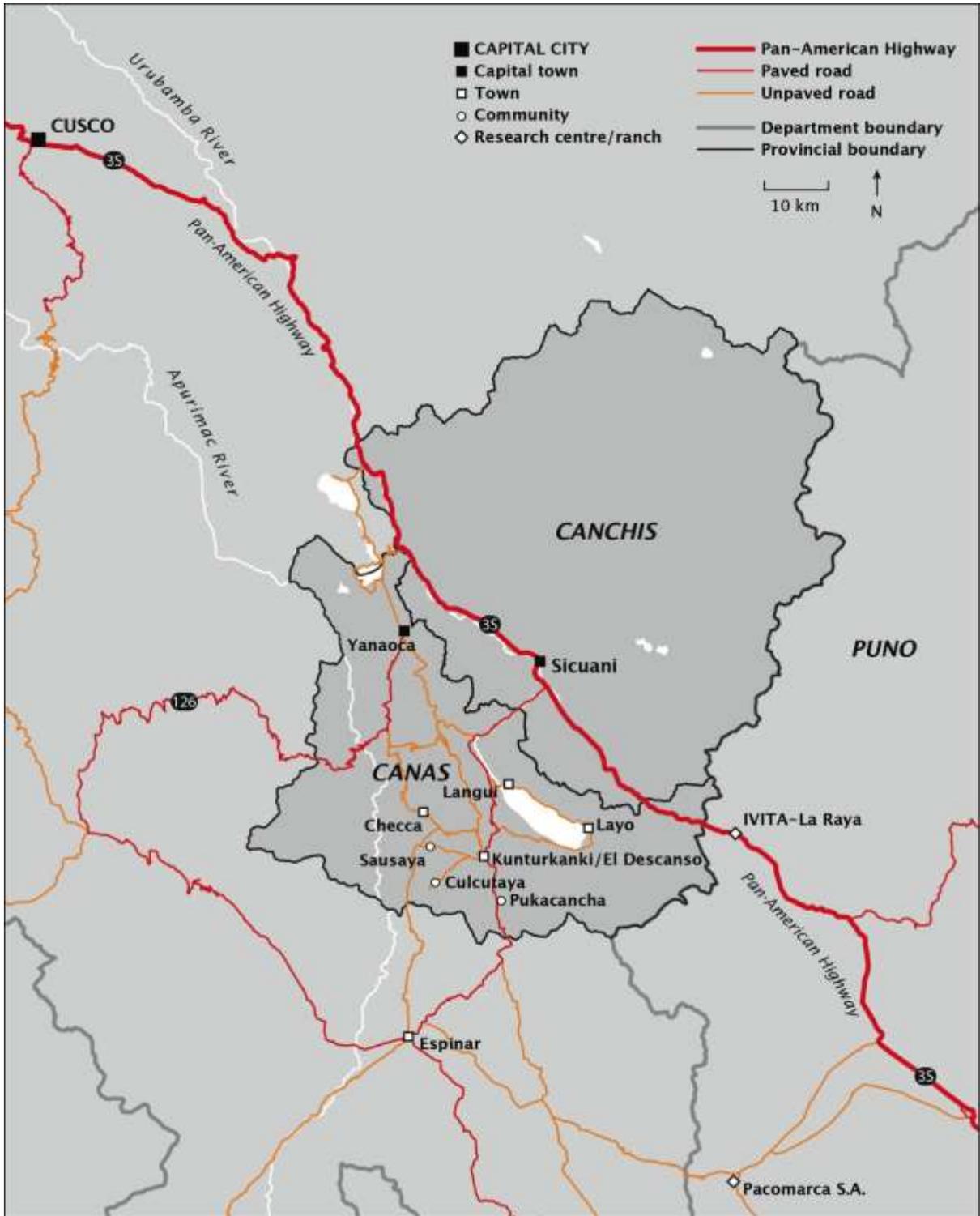


Figure 2 Map of research locations in Cusco (cartography by Eric Leinberger; additional data provided by author)

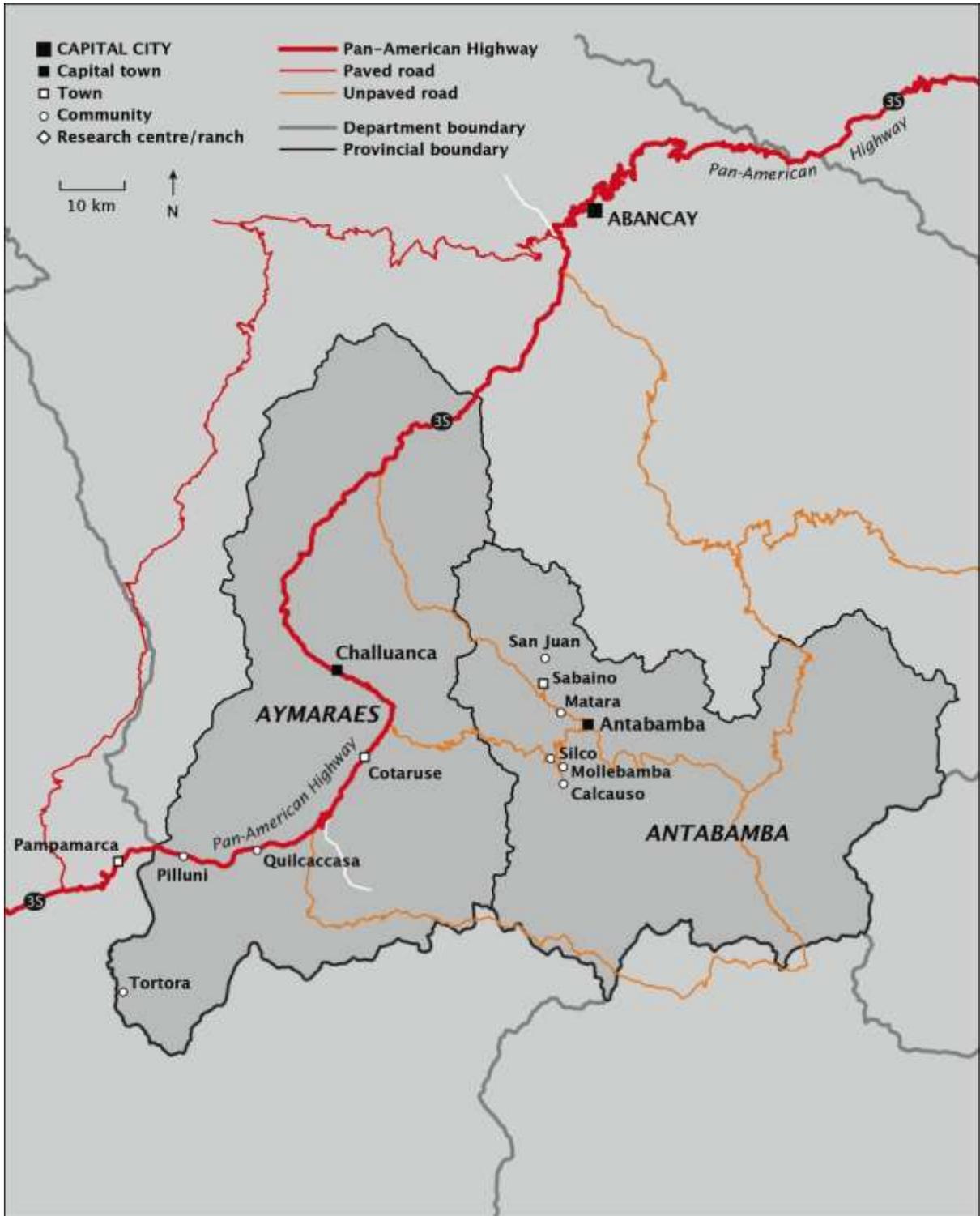


Figure 3 Map of research locations in Apurímac (cartography by Eric Leinberger; additional data provided by author)

Much of my research in the above places fit within the approach loosely described as participant observation, which included involving myself in various aspects of *kamayoq* life, from everyday activities to participation in formal events. In chapter two, I provide details of these methods and my overarching methodology, but in support of participant observation I relied on a selection of qualitative research methods that reflect my training as both an academic geographer and a development practitioner. This phase included the participation of forty-seven key informants and seventy-nine different *kamayoq* participants. I was also drawn by empirical necessity to conduct archival research at the *Archivo General de la Nación* in Lima, and to explore the wealth of secondary information produced by various government institutes and agencies, as well as non-governmental organizations.

In Chapter Two, I expand on the details of this methodology and I address many of the issues that arose in conducting my research within the spaces and places introduced briefly above. It is worth noting in particular the difficulty of navigating unequal power relations in conducting research in the post-colonial context of the Sierra Sur. The majority of my research, for example, was conducted in Spanish due to my lack of knowledge of Quechua – the indigenous language of the region. My use of Spanish risked entrenching the colonial and post-colonial relations that have subordinated Quechua cultural groups for centuries. Importantly for a research project of this kind, language is key to embedding particular epistemologies and genealogies (Mignolo, 1999) – a factor that places limits on a research project designed to explore the significance of reviving Quechua forms of knowledge production and dissemination, but doing so largely through the colonial legacy of *castellano*.

In an attempt to navigate these limitations, I worked closely with Justina Nuñez Nuñez – a bilingual educator and consultant to various development NGOs. For the most part, I employed Justina as a research assistant, as she helped to coordinate field research, provided direct translation from Quechua to Spanish, and transcribed interviews conducted in Quechua directly into Spanish. As I elaborate in Chapter Two, this format cannot entirely resolve the barriers to understanding what Janice Nuckolls (2010) described as the linguaculture of Quechua. It also raises the issue of fraternal patriarchy, whereby men – and in post-colonial contexts, often men of European descent – dominate women in civil society (not just within the family or household) (Pratt, 2009). Yet my relationship with Justina was not simply one of

dominant employer and dependent employee.⁹ Our relationship was characterized by mutual benefit, and at times her family offered an important network of support.¹⁰ Nonetheless, the risk of entrenching relations of fraternal patriarchy extended beyond our inter-personal relationship. At times, Justina conducted interviews in Quechua, enabling me to become a more passive observer. This approach has some benefits in allowing the use of multiple research methods at once. However, it was universally women who engaged in Quechua, reflecting the fact that language is an important driver in the internalization of patriarchal colonial structures, which have silenced and excluded women from political influence (Kuokkanen, 2012).

I elaborate on some of these issues in the following chapter. For the remainder of this introduction, however, I focus on delineating the contemporary context of the *kamayoq*, first in terms of the political-economic and structural conditions in which they live and work; and second, in terms of academic debates that have focussed on the (instrumental) revival of culture and indigenous knowledges within mainstream approaches to (ethno)development.

The dystopian present of the Sierra Sur?

In the Peruvian Southern Andes (Sierra Sur), Fritz Schumacher's dystopia of a large-scale capitalist machinery is arguably a present reality: rural pastoral and agricultural livelihoods that utilise appropriately scaled technologies are being displaced by a macro political-economic trajectory increasingly tied to large-scale, highly mechanized processes of extracting the minerals and hydrocarbons that uphold capitalist production chains and value systems. The myriad trails that connect disparate Andean households are being displaced as road

⁹ Justina also accompanied me from time-to-time as a friend and co-worker engaged in her own research and consultancy, but not employed directly by me as a research assistant. And when I did employ Justina for transcription, for example, she often 'sub-contracted' this work to her husband (also bilingual). These points complicate any assumptions that readers may have regarding her dependence on me as an employer, and by extension my ability to control her conduct in the field. Of course, at no point did I intend to do so, but such control could arguably be an unintended consequence of our relationship across cultures, genders, and social positions.

¹⁰ I define 'mutual benefit' in accordance with the Canadian government's Tri-Council Policy Statement: Conducting Research Involving Human Subjects, chapter 9 on Research Involving First Nations. I refer to the Tri-Council statement because: a) this research was partly funded by the Social Science and Humanities Research Council; b) the research received approval from the Behavioural Research Ethics Board of the University of British Columbia; and, c) to my knowledge, there are no equivalent Peruvian guidelines for conducting research with Quechua communities in the Sierra Sur.

construction proliferates across the region in order to facilitate mineral exploration and extraction. In search of employment in mines and other advanced industrial sectors, *campesinos* are migrating from rural communities to local towns and regional centres, and eventually to large urban areas such as Cusco, Arequipa, and Lima. Pastoral livelihoods face a crisis, as younger generations abandon traditional livelihoods and lifestyles in favour of the economic gains associated with urban centres (such as paid employment). These trends persist despite the presence of flagship policies such as *Programa Juntos* – a conditional cash transfer scheme designed to prop up rural livelihoods, but which is perceived by many *campesinos* to have a negligible impact on their everyday lives.

This migratory trend is not a particularly novel one, and the younger generation cannot be blamed for moving to cities in search of paid employment.¹¹ Neither should we romanticise the pastoral livelihoods and life systems that they leave behind. Nonetheless, this trend presents a crisis for the traditional subsistence activities that dot the Sierra Sur, and it challenges the related non-market forms of exchange that support networks of mutual assistance among Andean families and communities in times of both plenty and difficulty. It is even a potential crisis for the Peruvian alpaca industry – once a national symbol of Peruvian cultural heritage and rural life. Alonso Burgos, director of the private alpaca research station Pacamarca S.A. (which features in chapter seven), cast the lure of mining as irresistible. “If you compare a medium sized or even small sized mine or mining company”, he argued, “it just moves maybe a hundred times more [revenue] than all of the alpaca textile industry combined, and so really in terms of economics it’s is very small” (interview, 29 May 2013). The result is an exodus from a pastoral way of life and even from the alpaca industry altogether:

Less and less young people in Peru want to be alpaca breeders... It is very difficult to find people who want to be breeders, keepers, or alpaca peasants on the highlands anymore. So what’s going to happen when the elderly famers or herders die? Who is going to take care of the alpacas if all the young people want to go and work for the mines, or commerce, or road building or whatever the other job opportunities that are opening up in the country. If we keep on growing in the way we have been for the past 20 years, very soon nobody is going to want to work for a small little salary in the highlands. So who is going to keep the alpacas?

(Alonso Burgos, interview, 29 May 2013)

¹¹ For an elaboration of the notion of a “disappearing peasantry”, see Bryceson, Kay, and Mooij (2000), and particularly Kay’s (2000) chapter for the Latin American context.

Alonso's comments are not mere hyperbole; they were volunteered at the end of the interview, as he sought to portray his concern for both the alpaca industry, in which he is deeply invested, and the rural ideal of pastoral livelihoods in the highlands.¹² In terms of the national trajectory, Alonso's assessment also appears well founded. Despite the promises brought with the 2010 election of Ollanta Humala Tasso and his leftist party *Gana Perú*, little has changed in terms of environmental policies or addressing the concerns of rural communities.¹³ In 2011, the Vice-minister of Environment, José de Echave, and the deputy minister of intercultural affairs, Ivan Lanegra, both resigned as Humala's government continued to backtrack on electoral promises. José de Echave resigned as protests in Cajamarca continued against the US-based Newmont Mining Corporation's plans to expand the large Yanacocha mining operation with the addition of the \$4.8 billion Conga gold and copper mining venture. The expansion required the drying of four lakes, upon which local agricultural and pastoral communities depend. Despite Humala's promises, these communities are becoming more, rather than less, vulnerable to the incursion of the extractive sector. In a recently proposed legal change, the just six-year old Ministry of Environment, which must already defer to the Ministry of Mining and Energy, has been stripped of its jurisdiction over air, soil, and water quality standards, as well as its power to designate lands to be protected from industrial practices. The Peruvian government has also reinstated tax breaks for multinational mining companies (which already benefit from pro-industry policies), has streamlined the process of granting mining permits (including the fast-tracking of environmental impact assessments), and has reduced environmental fines by 65 per cent (Congreso de la República del Perú, 2014).

By this point, Ivan Lanegra's resignation had already signalled the reluctance of Humala's administration to build on its promises. Lanegra had struggled to overcome the entrenched position of other government officials while attempting to establish the grounds for the practical implementation of the Indigenous Consultation Law (*Ley 29785 del derecho a la*

¹² We need not rely on Alonso's word for the out-migration of younger populations; demographic models of rural locations clearly show the effects, as the classic demographic pyramid shape has given way to more homogenous and uniform looking columns, as the youthful base has migrated. For a visual representation of such demographic shifts, see Escobal and Ponce (2012, p. 26).

¹³ For a more systematic discussion of the tensions between broad macro-political swings to the left and the actual implementation of social or environmental laws and policies in Latin America, see Yates and Bakker (2014).

consulta previa a los pueblos indígenas u originarios) (Congreso de la República del Perú, 2011). Humala approved the law immediately upon taking office, arguing that it could provide the key to resolving the domestic conflicts around resource extraction. The law updated Peru's domestic legislation in line with the International Labour Organization's Convention 169, and was designed to ensure consultation with indigenous communities prior to the development of any new resource extraction projects. It was the identification of such "indigenous communities" that instigated the intra-governmental conflict, raising debates around the categorical definition of indigeneity. The ensuing conflict led to Lanegra's conclusion that his position was untenable in the face of opposition from the Ministry of Mining and Energy, which demanded the exclusion of the Andean region from the law on the grounds that it could further delay the new mining ventures they regard as crucial to Peru's economic growth.

With the Indigenous Consultation Law abandoned due to a lack of implementation and support, communities that oppose legal changes and the incursion of mining on their lands are treated as criminals, frequently put on trial for false charges. Some do not even survive the protests: in Cajamarca, two people were left dead in opposition to the Conga mine, which sadly pales in comparison to the 190 people that died in mining-related conflicts under the preceding Presidency of Alan García. As tensions continue to rise – with ten protesters killed in the Amazonian region of Bagua in June 2014, and eleven police officers taken hostage and killed in response – Humala's administration has reverted to heavy-handed treatment of collective mobilization (Bebbington & Humphreys-Bebbington, 2011). The recently introduced *Ley 30151*, for example, modified the existing Penal Code to effectively give the government a 'license to kill'. The law amendment removed the phrase "*en forma reglamentaria*" (according to regulation) and replaced it with "*u otro medio de defensa*" (or other means of defence), thereby allowing soldiers or police officers to kill or injure civilians without needing to follow regulations on the use of firearms or other weapons.

Given Peru's tumultuous recent history, it is perhaps unsurprising that Humala has been reluctant to control either the mining companies or the incursion of civil rights associated with a commitment to neo-extractivist development.¹⁴ This recent history has left two contrasting

¹⁴ The term 'neo-extractivism' has been used as a short-hand to refer to the contradictory development trajectory of continued dependency on the extractive industries for economic growth, while attempting to use the revenues accrued via the extractive sector to fund social investment programmes or other socially-oriented development schemes. This approach has been criticized for its failure to benefit rural

yet inter-twined legacies in the Andes. The history of Maoist terrorism – under the guise of the Shining Path – has left a scar that can still be felt among Andean communities, causing some to describe the areas previous dominated by the group as a “corridor for terrorism”.¹⁵ Oliver Starn has previously articulated the complexity of such a corridor, having explored how the *rondas campesinas* (peasant rounds) embodied a form of collective justice that fought back the Maoist insurgents, and yet were ultimately alienated by neoliberal legislation that was implemented in the wake of the defeat of the Shining Path. That legislation was promulgated by Alberto Fujimori, who Enrique Mayer (2009) described as being able to bask in the glory of approving the 1992 arrest of Abimael Guzman, the leader of the Shining Path. In 1996 he cemented his reputation for ‘eliminating terrorism’ by demolishing the other insurgent group, MRTA – *Movimiento Revolucionario de Túpac Amaru*. While Fujimori was lucky that the Peruvian secret police had already tracked down Guzman (leaving Fujimori with little to do himself), he was a popular president for a time, as he built schools (painted bright orange for all to see) and ceremoniously danced with the peasants, before returning to Lima to implement *Fujishock* – an aggressive neoliberal restructuring package that stabilized the economy at an enormous cost to Peruvian citizens, particularly the remote agrarian communities of the Southern Andes (Mayer, 2009; Theidon, 2013).¹⁶

At the turn of the millennium, in the wake of Fujimori’s disgraced presidential term, Andean communities reeled from the double assaults of the previous decades – torn apart by violent Maoist insurgencies and then aggressively ‘restructured’ from Lima, Andean communities became conditioned to treat collective organization with scepticism. They live in the kind of “shadow of terror” exposed by María Elena García (2005a, p. 35). It is telling, for example, that although much of my research took place in the municipality of Kunturkanki,

populations, thereby contradicting a kind of ‘new ruralism’ that might help to revive a more equal and sustainable development path in the Andes, and instead entrenching post-colonial development as usual (Bebbington & Humphreys-Bebbington, 2011; Damonte, 2012; Grugel & Riggirozzi, 2012; Gudynas, 2009; Yates & Bakker, 2014).

¹⁵ The former manager of the Soluciones Prácticas programme Escuela de *Kamayoyq*, Julia Hinostroza, used this phrase to describe parts of the Southern Andes and the effects that it has on collaboration and collective social mobilization. I take up the effects of this context in chapter six.

¹⁶ Agrarian neoliberal restructuring under Fujimori entailed the dismantling of the state apparatus associated with agrarian reform and rural development, including: closure of the agrarian bank; abolishment of subsidies and farmer’s credits; the closure of both the agrarian reform office and the bureau responsible for rural Andean communities; and the abolishment of the few remaining agricultural protectionist laws (Crabtree, 2003; Mayer, 2009).

which takes its name from the revolutionary figure of Túpac Amaru II, a sense of collective revolutionary verve, grounded in the unique Andean histories of figures such as Túpac Amaru, is far from the popular imaginaries of today's *campesinos*. The period of insurgency is referred to cryptically by some *campesinos* as the “socio-political movement” or as simply the *sasachaluy tiempo* – the “difficult time”.¹⁷ Rather than risk association with such times, on the whole the *campesinos* that participated in this research voiced a preference to insert themselves into proliferating markets by increasing the volume of surplus production for re-sale and/or equipping themselves with the training and skills necessary to compete in today's labour market. My point here is not to re-produce the kinds of bland narratives criticized by García (2005a), which cast Peru as an exception or anomaly in terms of collective action or depict the Andes as a ‘global margin’ (cf. W. P. Mitchell, 2006). In fact, Orin Starn (1999) reminded us how collective action in the Andes took shape *in response to* the Shining Path (rather than despite it), and Moisés Arce (2008) showed how the transition from Fujimorismo to the ‘softer’ forms of neoliberalism adopted by his successors has opened up *more* spaces for the re-politicization of collective action.

Nonetheless, particular and contextual histories of insurgent terrorism and neoliberalism have collided with development programmes in the twenty-first century to shape and re-shape Andean lives in new ways. Programmes implemented by NGOs such as Soluciones Prácticas, for example, further entrench the divide between what is cast as insurrectionary collective action, on the one hand, and liberating individual improvement on the other (as I explore in chapters four and five). The organization-wide aim of enhancing access to markets sets the tone for its market-oriented interventions; in the case of Escuela de *kamayoq* – the broad *kamayoq* training programme established by the NGO in the 1990s – priorities include improving awareness of market demands, enhancing product processing techniques, and facilitating the establishment of new physical and social channels to local and regional markets. This emphasis is not just an idiosyncrasy of Soluciones Prácticas, as projects across the Sierra Sur simultaneously attempt to extend market channels to previously ‘under-served’ areas and to integrate populations via new means.¹⁸ The degree of integration into broader

¹⁷ For an elaboration of the “difficult time” and its legacy in relation to the Truth and Reconciliation Commission established by Fujimori's successor, Alejandro Toledo, see Theidon (2013).

¹⁸ See, for example, the programmes of Sierra Productiva and Sierra Sur assessed by Escobal et al. (2012)

markets has therefore been interpreted as a sign of rural development, alongside other market-oriented indicators such as changes in strategies of diversification, the separation of decisions relating to consumption and production, simple reproduction versus accumulation, and technological improvements.¹⁹

The *campesino-a-campesino* methodology has emerged as a politically and operationally favoured model for achieving both aforementioned objectives, as expert *campesinos* such as *kamayoq* embed new market rationales while bringing other potential market actors into the fold. As I explain in chapter four on the contemporary revival of the *kamayoq* and the *campesino-a-campesino* model, this recent history reveals an institutional network within which the *kamayoq* are not the only players.²⁰ The successes of rural development in the Sierra Sur have often been tied to the acclaimed maturity of such a model, despite its varied implementation and success. The Peruvian state has even been keen to publicise and institutionalise the model, having rebranded itself as an ‘agent of innovation’ (Correa Aste, 2012; Vargas & Santa Cruz, 2010a). Yet this shift is not unique to the Peruvian case. The implementation of agricultural extension received widespread critique in the 1990s for failing to acknowledge the fact that it is a political process in which choices are made, alliances formed, exclusions effected, and worldviews imposed (Scoones & Thompson, 1994; Wolf, 1998). A recent resurgence of interest has therefore focussed on wider innovation systems that address market interactions, broader institutional and policy environments, the knowledge and capacities of farmers’ organizations to innovate, the strengthening of networks and alliances to support, document, and share lessons on farmer-led innovation, and the transformation of agricultural higher education (Scoones & Thompson, 2009).

¹⁹ Having conducted a largely quantitative economic analysis according to these indicators, Escobal and Ponce (2012) lamented that levels of ‘*campesinización*’ (peasantry) have not changed significantly enough between 1982 and 2008 to warrant a discursive shift from the term *campesinos* towards *productores comerciales* (commercial producers) or *asalariados* (a proletariat of salaried workers). The implication here is that without greater market involvement, *campesinos* will always be deemed as *campesinos* and little more.

²⁰ More generic terms used throughout the Peruvian Andes for individuals who carry out a role similar to the *kamayoq* today include *extensionistas rurales* (rural extensionists) and *promotores pecuarios* (livestock promoters). In the Sierra Sur, however, the term *yachachiq* is often used synonymously with *kamayoq*, despite their distinct – though closely related – historical origins. For a contemporary account of the role of *yachachiq* in programmes of *campesino-a-campesino* development in the Sierra Sur, see Escobal et al. (2012).

Yet the purported successes of the *campesino-a-campesino* model of knowledge extension have been far from uniform and do not point to a revitalized state in terms of providing the services and development programmes that are needed across the Southern Highlands. Data from the national office of statistics, INEI (Instituto Nacional de Estadística e Informática), on poverty rates in Cusco and Apurímac reveals the uneven nature of improvements in human development brought about by the horizontal transfer of technical skills and technological capacity (see Table 1 and Table 2). Data for Cusco, for example, reveals a decreasing trend in the incidence of poverty, from 63.1 per cent in 2004 to 51.1% in 2009. By contrast, data for the neighbouring department of Apurímac reveals an increasing trend from 65.2 per cent in 2004, to 70.3 per cent in 2009. On the whole, Cusco has benefited from large influxes of capital and favourable treatment from Lima, largely due to the department's importance in terms of tourism (which has brought additional investments, such as in the artisanal production of alpaca-related goods). Apurímac has struggled in Cusco's shadow, despite housing a number of archaeological sites equally as impressive as the tourist mecca of Machu Picchu in Cusco. Concessions to mining companies have not yielded the expected leap in investments, and the Peruvian state continues to under-fund programmes in the department due its small and dispersed population. These differences have important consequences, some of which I explore in chapter four in relation to participatory budgets (after all, what incentive is there to participate in budgeting decisions if, as is often the case in Apurímac, the budget is so small that the majority of proposals are unfeasible?).²¹

The spatial differentiation in trends of poverty incidence according to department also hides a finer scale of uneven development. The reported successes in Cusco, for example, are largely restricted to wealthy and accessible areas, such as the departmental capital of Cusco (with a poverty incidence of 24.7 per cent in 2009), neighbouring provinces such as Urubamba (42.2 per cent), and provinces on major highways (such as Canchis – 59.8 per cent). More remote and underserved provinces, such as Canas and Chumbivilcas continue to harbour incidences of poverty as high as 83.5 per cent and 85.7 per cent, respectively.²² In Apurímac,

²¹ See Herz (2011) for a visual depiction of trends in poverty rates, as well as for a comparison of Human Development Index (HDI) data for Cusco and Apurímac (Vargas & Santa Cruz, 2010b).

²² Administratively, Peru is hierarchically ordered – on a descending scale of size and decision-making – according to departments, provinces, regions, municipalities, and communities.

Table 1 Economic indicators of poverty in research locations (derived from INEI, 2010)

Jurisdiction	Monetary poverty			Inequality
	Total poverty (%)	Extreme poverty (%)	Poverty gap (%)	Gini coefficient
CUSCO	51.1	20.7	15.9	0.36
Canas	83.5	47.0	31.7	0.24
Checca	94.9	69.7	44.3	0.21
Kunturkanki	77.3	26.8	22.7	0.20
Langui	83.4	40.4	29.5	0.22
Layo	89.0	50.0	34.8	0.21
APURIMAC	70.3	40.3	27.6	0.32
Antabamba	79.1	52.8	34.0	0.31
Antabamba	78.4	46.8	33.4	0.31
Sabaino	79.6	50.6	33.0	0.14
Aymaraes	69.6	34.6	25.9	0.30
Cotaruse	89.2	72.6	42.2	0.28

Table 2 Non-economic indicators of poverty in research locations (derived from INEI, 2007)

Jurisdiction	Non-monetary poverty	Illiteracy		Employment	
	Population with ≥ 1 NBI **	Overall	Among women	Percentage of labour pool that is illiterate	Self-employment or employment in microenterprises
CUSCO	49.6	13.9	21.0	9.7	75.1
Canas	67.3	20.7	32.7	15.1	90.6
Checca	77.8	23.6	37.2	14.1	92.6
Kunturkanki	81.1	21.0	31.2	10.7	77.3
Langui	57.9	17.7	28.6	7.7	84.1
Layo	53.2	19.0	29.8	11.0	90.6
APURIMAC	49.7	21.7	32.2	12.2	77.5
Antabamba	85.2	21.5	34.3	15.4	79.0
Antabamba	72.5	21.3	32.3	18.3	75.6
Sabaino	89.6	22.4	37.3	6.2	70.9
Aymaraes	70.6	23.1	36.6	12.1	79.0
Cotaruse	90.7	15.9	35.0	9.4	54.4

** NBI = *Necesidad Básica Insatisfecha* (Unsatisfied Basic Necessity)

the picture is even more bleak, with incidences of poverty in the province of the capital city, Abancay, hovering around 58 per cent in 2009; in all other provinces of the department, incidences of poverty were over 70 per cent in 2009, rising as high as 79.1 per cent in Antabamba and 88.2 per cent in Cotabambas. Data from the 2009 Human Development Index (HDI) tells a similar story, as the provinces of Canas and Espinar lag behind departmental averages in Cusco for life expectancy, literacy, education levels, and household income; likewise, in Apurímac the provinces of Cotabambas and Antabamba fall short of the departmental average for the same indicators (Table 2).

Why, however, is there such a large scale of difference between the poverty rates of neighbouring Checca and Kunturkanki, and between the incidence of NBIs (unsatisfied basic necessities) between neighbouring Cotaruse and Antabamba? For the latter case, the geographical size of Cotaruse serves as a reasonable hypothesis, meaning that the district shrouds differences in conditions of access between a minority of towns and communities close to the highway, and the majority of communities that live days' walk away from market towns and municipalities. The case of Checca, however, questions the determining factor of distance, given that the municipality is less than an hour away by *combi* from Kunturkanki, and less than three hours away from Sicuani – a major economic centre on the highway between Cusco and Puno. As I explain in chapter four, these data reveal a complex patterning of the intersections between livelihoods, institutions, and poverty. It would be misleading, then, to rely on data – like those presented by Javier Escobal and his colleagues (2012) – that illustrate a high degree of uptake of agricultural technologies and techniques as indicators of development and poverty reduction.²³ Likewise, these spatial patterns overlap with the broader trends identified earlier in this section, reinforcing depictions of an uneven spatiality of poverty and capital-intensive development such as mining. Contrary to the neo-extractivist discourse of the Peruvian government, in Apurímac and Cusco the presence of mining seems to correlate with higher, rather than lower, incidences of poverty (as the excellent maps of mining concessions produced by the NGO CooperAcción vividly display (CooperAcción, 2014a, 2014b)). These statistics reproduce an uneven topography of development interventions, whereby communities and populations that happen to be located in areas well

²³ In their assessment of the two related programmes of *Sierra Productiva* and *Sierra Sur*, Escobal et al. (2012) quantify technology transfer and uptake, deploying technological change as a kind of proxy for advances in rural development.

served by government and non-government institutions and programmes stand to benefit, while even the most horizontal models of development fail to extend programmatic benefits far beyond institutional presence. In the analysis that follows, I move beyond these statistics to understand better the conditions that the *kamayoyq* are charged with improving as a cadre of mobile, peer-to-peer development extensionists.

The Sierra Sur therefore embodies Schumacher's dialectic: the effects of large-scale capitalist development – felt most keenly in terms of an unrelenting neo-extractivist growth paradigm upheld by successive neoliberal regimes – rub up against an ideal of horizontality that is embodied in the notion and practice of the *kamayoyq* as a 'culturally appropriate' peer-to-peer mechanism for building knowledge and livelihood expertise. In Peru, optimism surrounds the kinds of peer-to-peer programmes of knowledge extension and training in which the *kamayoyq* participate. There is a genuine sense that these networks can re-build rural services, and they can do so by attending more specifically to the needs of rural communities than has previously been possible. There is also hope that these networks may help to defend Andean culture and livelihoods in the face of structural pressures such as those outlined above. This optimism sits, somewhat paradoxically, within a broader policy shift towards the inclusion of culture and indigeneity within traditionally western-oriented forms of development. I now turn to this context, placing the notion that the *kamayoyq* are 'culturally appropriate' into debates around 'development with identity', 'neoliberal multiculturalism', and 'ethnodevelopment'.

Ethnodevelopment: critiquing the politics of 'culturally appropriate' development in the Andes

To frame an analysis of the *kamayoyq* – as a historically constituted phenomenon of knowledge production and redistribution amongst Andean households – it is worth highlighting the fact that they sit within a broader trend of incorporating culture and ethnicity within the paradigms of a globalized development constellation. Attention to this trend in Latin America has proliferated in recent decades, in part due to some high-profile shifts in the politics of culture, ethnicity, and indigeneity in the region. The elections of Evo Morales in Bolivia (2005),

Rafael Correa in Ecuador (2006), and Ollanta Humala in Peru (2010) have been described as a ‘new dawn’ for indigenous politics in the region (Escobar, 2010; Yates & Bakker, 2014).²⁴ Meanwhile, indigenous movements – including the Zapatistas in Mexico, CONAIE in Ecuador, the ‘Water Wars’ in Bolivia, and women’s movements in Peru – have been gaining political traction, building on the International Labour Organization’s 1989 Convention on Indigenous and Tribal Peoples (ILO 169), which defined indigenous territory, fought for indigenous cultural integrity, and demanded the recognition of indigenous territorial rights (Andolina, Laurie, & Radcliffe, 2009; Anthias & Radcliffe, 2013; Escobar, 2008; García, 2005a; Muehlmann, 2013; Postero, 2007).

While Peru has often been cast as an outlier in this broader regional trend towards ethnic inclusion (Silva, 2009; Yashar, 2005), authors such as María Elena García (2005a), Marisol de la Cadena (2000), and Kimberley Theidon (2013) have illustrated that, while less prevalent in the regional and global consciousness, indigenous activism has been re-shaping the everyday politics of culture and ethnicity in the Andes for decades and continues to do so. In this dissertation, I engage with such an everyday politics, focussing not on national movements and political affiliation, but instead on how political identities and cultural subjectivities are wrapped up in a micro-politics of repositioning culture within development. While Andean *campesinos* are being afforded room to re-assert their cultural and ethnic identities on an everyday level (they were previously encouraged to identify with the *campesino* social class, rather than according to ethnic groups), development programmes are partly responsible for cultivating the context for such a re-assertion, as they establish ‘culturally appropriate’ mechanisms for filling the gaps that have been left by a retreated neoliberal state.

While the policy framework referred to as neoliberal multiculturalism – which I contextualize in chapter two – shapes the form and function of these approaches in contemporary Peru, scholarship on culture and ethnicity in the country has also taken on its own particular emphasis. The Peruvian body of (largely elite) scholarship known as *Indigenismo*, for example, was ultimately a conservative intellectual movement that carried with it centuries-old strategies of colonial control over indigenous populations and Darwinian assumptions of racial hierarchies (Andrés García, 2007, 2010; Lucero, 2008; Postero, 2007).

²⁴ Although Rafael Correa is not indigenous, his leftist position arguably opened the doors to greater ethnic and cultural representation in the country.

Meanwhile, the term *mestizo* has – somewhat counter-intuitively – been appropriated as a way to develop de-Indianization as a decolonizing indigenous strategy (de la Cadena, 2000).²⁵ Despite an apparent lack of discourse on indigeneity in the Peruvian Andes, the fluidity indigenous subjectivities highlighted by de la Cadena has prompted interest in the notion of ‘interculturality’ (*interculturalidad*), which has been used in Peru to signal an interactive process of mutual influence among distinct cultural and linguistic groups (Rengifo Vasquez, 2010). Yet, as María Elena García (2005a) has pointed out, state-led efforts at intercultural education have met resistance from intercultural activists, who oppose the training of ‘authentic’ indigenous leaders in spaces that reproduce neo-colonial imaginaries, and are often far removed from their own communities. The patterning of indigenous politics, she reminds us, varies in many ways as indigenous peoples continue to negotiate notions of Indianness and citizenship in ways that are often not expected among the institutions and organizations of ‘development with identity’, such as the state or international NGOs.

Notions such as ‘neoliberal multiculturalism’ and ‘interculturality’ only go part of the way to explaining how phenomena such as the *kamayoq* fit and operate within the multi-scalar networks of a contemporary development constellation. As a way of conceptualizing the paradoxical relations between development and indigeneity, therefore, in this dissertation I deploy a recursive re-working of the notion of ‘ethnodevelopment’. The programmes and their outcomes that I explore in this dissertation cannot be reduced to neoliberalism and its intersection with multicultural policies; neither can they be attributed entirely to the spontaneous revival of autonomous forms of indigenous social practices, institutions, and territorial governance. I use the term ethnodevelopment to capture the ways in which culture is put to work by globalized development programmes, simultaneously instrumentalizing and protecting cultural practices in the process. The processes and effects of ethnodevelopment therefore unfold both in the policies and practices of transnational institutes (e.g. the World Bank) and NGOs, as well as in the everyday socio-cultural practices of cultural groups increasingly connected to these globalized development paradigms. This use of the term builds on the conception developed by Robert Andolina, Nina Laurie, and Sarah Radcliffe (Andolina et al., 2009; Laurie, Andolina, & Radcliffe, 2005; Radcliffe & Laurie, 2006a), who use

²⁵ ‘*Mestizo*’ generally refers to an individual of combined European and indigenous American ethnic descent.

‘ethnodevelopment’ to describe the implementation of policies that are designed to reconcile what Hale described as “the paradox of simultaneous cultural affirmation and economic marginalization” (2002, p. 493).

As a conceptual frame, ethnodevelopment usefully captures how “the relationship between development and culture has played out through discourses and interactions...that both open and close possibilities for indigenous politics and development” (Andolina et al., 2009, p. 232). Consequently, as I explain in detail in chapter two, there are two inter-dependent sides to ethnodevelopment as a concept. First, it reveals how cultural affirmation is not only often compatible with, but in fact the very object of, neoliberal economic development. Strategies such as the incorporation of indigenous rights and the deployment of indigenous culture as social capital cast indigenous populations as objects of development while creating the appearance that they are able to participate as active subjects. This first side emphasizes the instrumentalist uses of culture in contemporary development paradigms, which cast culture as a resource and as an institution. Second, however, Andolina et al. argue that there is also a positive side to ethnodevelopment, as development paradigms open up new spaces for more plural and flexible understandings of culture, which reveal the ways in which it can re-shape development as a set of culturally embedded practices and meanings. This approach offers the opportunity for overcoming the instrumentalization associated with the first articulation of the paradigm, looking to bottom-up constructions of indigenous identities and how they intersect with the multi-scalar and multi-sited nature of indigenous livelihoods and political articulations. Conceived in this way, ethnodevelopment helps to frame an understanding of the contextual and relational unfolding of the material and cultural effects of the globalized development constellation in the Peruvian Sierra Sur.

The two sides of ethnodevelopment are inter-dependent, and their effects must be explored through grounded and contextualized ethnographic accounts. How, then, can we account for this inter-dependency in practice, and how can we account for the ways in which more plural forms of culture (embodied in the second meaning of ethnodevelopment) might help to overcome the instrumental use of culture according to the first side of the paradigm? How do these more plural forms come about, and from where do they emerge?

To address these questions, the ethnodevelopment frame needs to be complemented with a body of work that seeks to recover and re-affirm Andean cultural and social systems in order to generate autonomous, diverse solutions to a plurality of development needs (a body of work

that I return to most explicitly in chapters two, six, and seven). This work focuses on Andean understandings of territorial development, Andean cosmologies, the Andean living community, the reassertion of Andean agro-ecologies, and decolonization through cultural re-affirmation (Grillo Fernandez, 1998a, 1998b; Marglin, 2000; Rengifo Vasquez, 2009; Schejtman, 2009). Andean cultural affirmation is seen as a route to decolonizing ethnodevelopment by reconfiguring indigenous territories and indigenous political authority (Naveda Felix, 2008), and Andean decolonization sets an agenda for rethinking the categories, relations, values, and knowledges that inform decision-making and participation in diverse polities (Aparicio & Blaser, 2008; Radcliffe, 2014). Focus has been placed on the recognition and revival of cultural norms and institutionalized social practices that have their origins in the variety of pre-Hispanic societies that characterized the region. When underpinned by a process of cultural affirmation, it is hoped that the revival of these social practices and institutions can place development back in the hands of local populations, potentially contributing to decolonial projects (Escobar, 2007, 2008, 2010; Mahon, 2010).

To what extent could the *kamayoyq* contribute to these processes of Andean decolonization, and to what degree would it be compatible with their participation in the development programmes of transnational NGOs and the Peruvian state? In this context, the *kamayoyq* fit alongside other revived notions such as the similar phenomenon of the *yachachiq*, the reciprocal relation of *ayni*, and the *ayllu* form of social organization. These notions fit within attempts to revive Andean epistemologies and to link them to forms of inter-cultural learning, which can open possibilities for nurturing life and plural forms of development (Ishizawa Oba & Rengifo Vasquez, 2009; Rengifo Vasquez, 2010).

In chapter two, therefore, I expand on the analytical frame of ethnodevelopment, drawing on Andean de-colonial scholarship to more comprehensively develop Andolina et al.'s second, more plural paradigm of understanding how culture and development intersect. I relate this plural conception to debates emerging from the Modernity/Coloniality/Decoloniality research collective, which is attempting to move beyond post-colonial critiques to explore grounded, de-colonial alternatives by building out from the lived realities of a diversity of Latin America societies and cultures (see Mignolo & Escobar (2010) for an overview). I do not, however, delve into the largely theoretical debates about the respective merits of post-structural, post-development, post-colonial, or de-colonial approaches. Rather, focus remains on the *kamayoyq* and their increasingly prevalent role within a multi-scalar development constellation. As such,

I attempt to marry critical, political economic perspectives on the structural formation and workings of the development constellation, with cultural critiques (post-colonial and de-colonial) of what these political-economic perspectives often miss from their frame of analysis. As I explain in chapter two, this theoretical approach matches my methodology, as I continuously track back and forth between the diverse and plural worlds of the *kamayoq*, the often technocratic workings of NGOs, and the newly-emerging yet rigid state structures for including indigenous actors into nationwide development programmes.

To recapitulate briefly, I use the notion of ethnodevelopment to frame the ways in which culture and indigeneity are now routinely incorporated into the process of development, often for the purpose of preserving established development paradigms. A distinction exists, however, between the instrumental use of culture by the globalized development constellation, and the ways in which more plural and flexible notions of culture can re-determine development trajectories from the ‘bottom-up’. Achieving the second paradigm may mean paying attention to current debates around the decolonization of development. The question surrounding the *kamayoq* is whether this revived pre-Hispanic phenomenon, which operates within the networks of both formulations of the ethnodevelopment paradigm, can re-affirm Andean cultural values, dynamic forms of knowledge, and multiple ways of enacting the world. Can the *kamayoq* uphold a view of heterogeneous worlds, or will the concept and practice be subsumed within, and put to instrumental use by, neoliberal ethnodevelopment? I address this question by weaving together a narrative of the *kamayoq* with a recursive working of the notion of ethnodevelopment, in the process challenging it with some of the insights from scholarship and activism on decolonizing Andean living worlds.

Structure of the argument

In this dissertation, I seek to understand the ways in which the *kamayoq* phenomenon harbours or internalizes the tensions associated with the unfolding of ethnodevelopment, as outlined above according to the two potentially competing paradigms. Rarely have scholars captured the dialectic of these paradigms in one phenomenon. In attempting to do so here, I address questions such as: how do the specific (mobile but situated) practices of the *kamayoq* intertwine with Andean understandings of nature, livelihood, and (collective) organization? What is the role of *kamayoq* in linking Andean principles and practices with broader structural and

environmental contexts of change, that is, in coupling Andean epistemologies and political ontologies with structuring forces such as neoliberal ethnodevelopment? What forms of knowledge and expertise are being promoted by *kamayaq* as ‘technical extension’ agents, and how do these forms help to re-affirm dynamic Andean conceptions knowledge?

To structure my argument in response to these questions, I have focussed on scholars of culture and development in the context of the Andes (see, for example: Andolina et al., 2009; de la Cadena, 2000, 2005; de la Cadena & Starn, 2007; Erazo, 2013; Escobar, 2008; García, 2005a; Laurie et al., 2005; Lucero, 2008; Mayer, 2002, 2009; Postero, 2007; Radcliffe, 2012; Stobart & Howard, 2002; Valdivia, 2008, 2009; Zimmerer, 2012, 2013). I have also explicitly drawn on Peruvian scholars discussing issues of interculturality, decolonization, and plural conceptions of the Andean living community (or lifeworld) (Apffel-Marglin, 1998; de la Cadena, 2008, 2010; García, 2003, 2005a, 2008; García Rivera, 2005; Garteiz-Aurrecoa & Gadea Soler, 2007; Grillo Fernandez, 1998a, 1998b; Marglin, 2000; Naveda Felix, 2008; Oliart, 2011; PRATEC, 2012, 1998, 2002; Rengifo Vasquez, 2008b, 2009, 2010; Valladolid Rivera, 1998). I then branched out from this starting point according to theoretical or conceptual overlap, maintaining a focus on Latin America where possible (such as, the work of Mario Blaser in Argentina, or Shaylih Muehlmann and Juanita Sundberg in Mexico). Occasionally, I have embraced some conceptual tools from scholars working on indigenous issues in other continents (such as Glen Coulthard’s (2007, 2014) critique of the politics of recognition, or Rauna Kuokkanen’s (2007, 2011a, 2011b) approach to understanding indigeneity and diverse economies). Less frequently still, there is a degree of empirical overlap: Mark Carey (2010), for example, has explored the symbolic and material role of glaciers in Andean culture – a project similar to that undertaken by Julie Cruikshank (2007) in the Yukon territory of Canada.

On the whole, however, I have not addressed the broad body of scholarship on indigenous studies beyond Latin America, given the problems associated with exporting accounts of indigeneity from settler-colonial societies (North America, Australia, New Zealand, etc.) to geographical settings where the complex histories of populations and their movements often defy the universal shorthand of ‘indigenous’ (Cruikshank, 2007). It is doubtful, for example, that a single, unified “Indigenous paradigm” (however internally heterogeneous) could adequately embrace the diversity of indigenous contexts and scholarship across the Americas, since the import of universalized, yet heterogeneous notions of indigeneity does not allow

sufficient room for self-determining the paradigm's epistemological assumptions (Cf. Kuokkanen, 2000). In the Peruvian context, it is perhaps even nonsensical to separate artificially indigenous and nonindigenous scholarship, given the contested histories of *Indigenismo*, the political production of *Indios* and *campesinos*, and the appropriation of the term *mestizo* by indigenous groups, activists, and scholars (de la Cadena, 2000). Much of the de-colonial work emanating from Peru could even be accused of developing a form of neo-*Indigenismo*, as *mestizo* scholars based at organizations such as PRATEC in Lima continue to speak for Andean cultural groups and their ways of being.

Finally, while I use terms such as 'neoliberal multiculturalism' and I make references to neoliberal development, I do not take neoliberalism to be a conceptual starting point of enquiry, subsequently exploring the various forms and effects of marketization on indigenous territorial claims and natural resources. Rather, I begin with the peer-to-peer system of the *kamayoq*, designed to re-place the governance of Andean production and re-production in the hands of what Carlos de la Torre described as "culturally appropriate" indigenous institutions. This approach has been wrapped up in the development strategies of various NGOs and, most recently, the Peruvian state. Consequently, the process does include the promotion of markets. However, the *kamayoq* phenomenon is by no means *exclusively* a neoliberal phenomenon (cf. Walker, Roberts, Jones III, & Fröhling, 2008), it is not part of an *inevitable* process of co-optation (cf. Kothari, 2005), and it cannot be described simply as a *variegated* product of neoliberalization according to messy sociocultures (cf. Bakker, 2010a).

As agents of cultural reproduction, *kamayoq* have the potential to uphold and strengthen Andean ideals of dynamic knowledge, collective life, and communal resources; they operate within networks of multiple, hybrid forms of knowledge and expertise to structure the ways in which Andean social practices and institutions shape the politics of knowledge and resources in the Andes. While I do not go so far as to conclude that *kamayoq* can bridge the gap between technological innovation and social justice (cf. Papaioannou, 2011), and I acknowledge that the ways in which the *kamayoq* re-enact Andean ideals is – at times – characterized by paradoxes and internal contradictions. My sympathetic critique of how the practices of the *kamayoq* are unfolding within contemporary development networks is not an attempt to consign the *kamayoq* to some static category of indigenous practices, nor to insert the phenomenon into Western conceptions and practices of development.

Structure of the dissertation

In addressing these questions, the dissertation proceeds as follows. In Chapter Two, I position the everyday practices of the *kamayoq* within the globalized ethnodevelopment constellation. I expand on a two-fold conceptualization of ethnodevelopment that focuses on the intersection of an instrumental use of culture as a resource and a more diverse and plural understanding of culture that is being deployed by Andean scholars to explore a decolonial alternative to Westernized development. I then position myself within this ethnodevelopment constellation, elaborating a multi-sited ethnography, the spaces and places in which it was conducted, and the methods that underpin it. I also address some of the challenges and limits to engaging in a multi-sited ethnography of the *kamayoq* in the Sierra Sur, before ending the chapter with reflections on the value of multi-positionality to the research-actor.

In Chapter Three, I argue that the recovery and insertion of indigenous social practices into broader development trajectories risks: a) shrouding complex histories, which often entail periods of violence and oppression as well as insights into unfolding cultural relations; b) undermining the developmental project itself, as policies that seek to erase histories inevitably face resistance. I make this argument through a historical analysis of the *kamayoq*, focussing largely on their institutionalization within the rigid structures of the Inka state, but also exploring their origins in pre-Inka societies of agro-pastoralism and their demise under Spanish colonialism. I draw on a Polanyian approach to political-economic integration to build an understanding of the shifting form and function of the *kamayoq* under different modes of production and governance that were defined by distinct combinations of four principle forms of integration: reciprocity; redistribution; exchange; and householding. This Polanyian approach also becomes useful in later chapters (four and six), as I explain the contemporary role of the *kamayoq* in institutional embedding diverse forms of economic organization.

In Chapter Four, I begin charting the contemporary revival of *kamayoq* in concept and practice. I contextualize the period of implementing the *campesino-a-campesino* model with a discussion of the participatory turn in development studies, before linking the evolution of agricultural innovation systems in Peru to the broader politics of knowledge associated with ‘farmer first’ approaches to rural development. These approaches, I argue, reflect a contemporary form of ethnodevelopment *technique*, which focuses on the technical means of development rather than its ends. Empirically, I outline the re-institutionalization of the

kamayoyq from 1986, focussing on the establishment of Escuela de *Kamayoyq* by the NGO Soluciones Prácticas, and positioning their revived role in relation to the household economies characterize the Sierra Sur. I then begin the critical analysis of the contemporary form and function of the *kamayoyq* by outlining a temporal shift in the kinds of practical knowledge they embody and disseminate. This raises questions about the functioning of the *kamayoyq* system as a ‘culturally appropriate’ form of horizontal development, reveals how they contribute to an uneven topography (uneven spatial patterning) of development interventions, and identifies the exposure of the *kamayoyq* as they are expected to take on political leadership roles and yet not afforded the means with which to do so.

In Chapter Five, I take the critical analysis of contemporary forms further, focussing on the national programme of certifying *kamayoyq* knowledge and skills, which was introduced in 2010 by the Peruvian state with the help a network of non-state institutional partners. This programme fits within a broader trend of educational reform in Peru. I therefore revisit the notion of ethnodevelopment, developing it in relation to intercultural education and professionalization, contrasting top-down approaches associated with neoliberal multiculturalism to the decolonial perspectives on cultural diversity and educational plurality proposed by Peruvian organizations, activists, and scholars. I explore the certification programme by re-positioning the *kamayoyq* in relation to Paulo Freire’s ‘pedagogy of the oppressed’ (used as a framing device by Soluciones Prácticas) and Foucault’s notion of *dispositif*, asking whether a national programme can live up to Freire’s radical pedagogy. I then chart the discursive, legal, and institutional development of the certification programme, before exploring how the resulting knowledge indicators and functional fulfillments (used to assess *kamayoyq* for certification) act as a *dispositif* in conducting the conduct of the *kamayoyq*. I end the chapter by exploring some of the uneven effects of implementing the certification system and some of the difficulties of attempting to normalize *kamayoyq* knowledge and practices at the national scale.

In the final part of the dissertation, I zoom back out from the *kamayoyq* somewhat to explore some broader issues of development in the Sierra Sur. In Chapter Six, I explore the degree to which the notion of *Andinidad* – an Andean way of doing things – helps to build a diverse economy, where the ‘sacred’ Andean values of reciprocity, collectiveness, and communal ownership operate alongside proliferating forms of market exchange. After explaining the sacred Andean values and positioning them in relation to the commons, I bring

back Polanyi as a way of explaining how these values might produce “a distinctive type of political economy” (Polanyi, 1977, p. 166). I begin exploring this possibility by charting the role of the *kamayoq* in upholding the Andean relations of reciprocity known as *ayni* and *minka*. I then address the issues of communal and collective living, identifying the ways in which they have been incorporated into ethnodevelopment paradigms in the Andes (such as in recognizing *Tierras Comunitarias de Origen*; Community Lands of Origin). Tania Li (2010) used the term ‘communal fix’ to encapsulate how these paradigms simultaneously incorporate and protect indigenous populations and their communal lands. I adapted this term to use the ‘collective fix’ as a way of exploring how collective social organization – as a somewhat quotidian part of Andean life – is deployed within an ethnodevelopment paradigm both to absorb surplus populations otherwise externalized from market action as a coherent economic actor within capitalist processes of value accumulation, and protect the collective from the harshest effects of such participation in the market. I explore the value of the concept in relation to associations of production (alpaca herders) and reproduction (*kamayoq*).

Finally, in Chapter Seven, I return to the notion of an Andean living world, exploring how *kamayoq*-alpaca relations unfold within the context of a globalized alpaca industry. I begin by exploring the Andean living world through the lens of intimate ecologies and the ontological turn, before re-visiting the historical significance of the *kamayoq*, who were responsible for channelling various celestial notions of alpaca vitality through a series of rituals tied to the *Yacana* (a camelid-shaped constellation said to descend to earth to infuse species power in the alpacas). I explore how these rituals are being promoted within ethnodevelopment programmes today, albeit in modified form. I then link these programmes to the contemporary alpaca sector, conducting an autopsy of a new techno-natural *yacana* that revolves around biotechnological genetic breeding programmes to re-vitalize ailing alpaca herds (from centuries of in-breeding). I explore the links between these programmes and the *kamayoq*, uncovering how they contribute to a ‘re-wilding’ of alpaca populations and the establishment of a kind of ‘vital economy’.

I conclude the dissertation by re-capitulating the narrative of the *kamayoq* and my main arguments and contributions. I then re-visit two central conceptual components of the dissertation. First, I rework the notion of ethnodevelopment and the question of how to identify plural and diverse forms of culture without risking their instrumental inclusion within Western development paradigms. Second, I explore the value of reading the case of the

kamayoq through the contrasting orientations of Polanyian economic integration, on the one hand, and the decolonial option of cultural diversity, pedagogical plurality, the Andean living world, on the other. I end with some thoughts on future research directions.

Two

***LLIKA* METHODOLOGIES: POSITIONING THE *KAMAYOQ* WITH THE CONSTELLATION OF GLOBALIZED (ETHNO)DEVELOPMENT IN THE ANDES**

In this chapter I establish the lay of the land for an investigation into the increasingly important role of the *kamayoq* within the multi-scalar constellation of globalized development. I use ‘constellation’ as a metaphor for the dynamic and diagrammatic nature of development networks. As I explain, there are cultural underpinnings to my use of the constellation as a metaphor – underpinnings that raise questions about the instrumental use of culture within development. I therefore position the *kamayoq* within the concept and practice of ethnodevelopment, as a subsidiary component of a globalized development constellation. The ethnodevelopment paradigm attempts to re-value and protect culture and ethnicity from the localized effects of global neoliberal development paradigms, even as it simultaneously risks instrumentalizing culture as a resource and as an institution.

To explore how the *kamayoq* fit within this context, I present the case of a networked ethnography that builds on a multi-sited and multi-locational approach. The sites of ethnodevelopment reflect particular nodes in the constellation of development, and reflect the projects, programmes, and interventions of development agencies. The locations are the places in which the material and discursive effects are felt. Developing such a networked ethnography of the *kamayoq* in the Andes necessitates a multi-positioned perspective that also engages with a diversity of ways of knowing the world. This multi-positionality points to the need for a kind of “multi-epistemic literacy” (advocated by Rauna Kuokkanen and Juanita Sundberg) or a “dialogue of knowledges”, as proposed by the Peruvian organization PRATEC. I conclude by exploring how we might re-connect the dots of the development constellation, not by resorting to the image of a singular, global force of development but by exploring globalized interconnections at the sites and locations where locally articulated livelihoods,

worldviews, cultures, and development aspirations coalesce in part according to their broader structural coupling. I begin, however, by elaborating how the everyday world of the *kamayoj* intersects with the increasingly dense networks of an ethnodevelopment constellation in the Andes.

Living and learning at five kilometres above sea level

On a frigid early-August afternoon in 2011, I took a trip to one of the remote communities that I would encounter in the Peruvian *puna* – the high altitude Andean pasturelands, dotted with the disparate homes of largely indigenous *campesinos* (peasant farmers) and *alpaqueros* (alpaca herders, or pastoralists). I was travelling with a project manager and a technical engineer from the Sicuani office of the non-governmental organization Soluciones Prácticas (the Latin-American arm of the UK-based international NGO now known as Practical Action), along with a consultant veterinary practitioner and a local community mobiliser. Shielding from the biting wind at 5,200 metres above sea level (masl), a local *campesino* – Alejandro – crouched in the rear bed of the Toyota Hilux pick-up truck, the quintessential fieldwork vehicle in the Sierra Sur for any agency, whether an NGO, government ministry, or mining company. I had arrived at this situation having worked for Practical Action’s UK and Nepal offices at various points over the previous decade, and it was at the UK head office that I first learnt about the *kamayoj*. Building on my networks with former colleagues, I had travelled to the epicentre of Soluciones Prácticas’ flagship programme of training *kamayoj*, where they conduct capacity-building sessions in remote villages with people like Alejandro.

We were a few hours’ drive by *trocha* (dirt road) from Sicuani, in the Canchis region of the department of Cusco. Having left the end of the dirt road a kilometre or so behind us, we approached across the sodden fields to a small, three-building *kancha*.²⁶ Alejandro climbed carefully from the back of the truck, as if it would roll away with his collection of potatoes, bread, and coca leaves if he were to let it slip from his grasp. After slinging his supplies over his shoulder in a bright orange and red woven blanket, he led us into his home as light hail rattled off the steel roof protecting his ‘improved’ concrete buildings. In the eyes of the NGO

²⁶ A *kancha* is a traditional Andean architectural formation, consisting of three or more rectangular buildings organized as an enclosure with a central courtyard.

workers, Alejandro's home was 'improved' because he no longer relied on traditional materials, such as adobe walls and a thatched roof. Instead, the new steel roof protected a network of speakers that hung above his courtyard as part of a sound system that was powered by one small solar panel, which stood erect on a steel pole rising from the corner of one building and reflecting the vibrant Andean sky.

As the hail turned to the kind of sharp snow that (increasingly) characterizes the harsh Andean climate, we took shelter in Alejandro's oldest building – a small, traditional adobe hut with a briquette fireplace for cooking and little in the way of light, natural or otherwise. But the strong Andean sun still shone through the intermittent precipitation as it crept through the cracks of the ragged snow-capped Andean peaks that surround his home – and only his home, since his closest neighbours are kilometres down valley closer to where the road ends. As the sunlight hit his home, the green glass and plastic bottles that were cemented into his walls gently shimmered. These bottles are not decorative; they are an integral component to Alejandro's incremental improvements. Placed horizontally through the width of the wall, and grouped in sixes or so, the bottles serve two related purposes: they let more light into the small, dark room; and in the process, they harness the strong solar radiation of the Sierra Sur to provide a natural source of thermal insulation.

Yet my attention to these bottles didn't last long. Already nauseous from the altitude (living in Cusco at almost 3,500 masl seemed little preparation for rising above 5,000 metres), my eyes stung and my throat dried from the heavy smoke that began to fill the room from the afternoon fire in the kitchenette. Reflecting my bias as a former employee of Practical Action, I asked Alejandro why he hadn't included an improved stove into his renovations. These stoves increase the efficiency of cooking and reduce the accumulation of smoke, and are now a ubiquitous component of NGO rural development programmes the world over (as if they are a panacea to all the issues facing the kitchen as a domestic workspace).²⁷ From the sitting area – a space large enough for about four people and laden with alpaca skin rugs – Alejandro invited me to take the two steps down into the kitchenette. There he told me that he had already built a chimney, as he pointed to a small pipe in the thatched roof that was providing little relief to the trapped smoke. Besides, he said, his wife prefers to squat at the side of the

²⁷ A recent study revealed that improved stoves are now a feature of up to 40 per cent of households in the Sierra Sur, making them amongst the most accepted 'appropriate technologies' introduced by development programmes (after irrigation technologies) (Escobal et al., 2012).

traditional fireplace, absorbing the radiant heat while she cooks, thereby taking the edge off the harsh alpine nights.

This image – of Alejandro’s wife hunched over a small, smoky fireplace as she prepares the food from ingredients that she most likely collected and/or transported – invokes typical debates around the gender division of labour in rural households. The kinds of patriarchal relations often observed in peasant households, however, do not characterize those in the Sierra Sur. This difference is reflected in the term *chachawarmi* – a conjugation of *chacha* (man or husband) and *warmi* (woman or wife), which anthropologist Enrique Mayer has presented as a coherent and unitary husband-wife team.²⁸ Valorising such a concept, however, seems to ignore the so-called double burden of women, as they take on domestic labour duties not shared by males while contributing in unacknowledged ways to the productive sphere. Indeed, Alejandro’s wife wasn’t at home to tell me herself about her preference for a traditional fire; she had spent the night in a small mountain cabaña a couple of hours’ walk away, where she could attend to their *hato* (livestock) but without the reward of an evening fire (the thatched roofs of these cabañas reach the ground, leaving no room for open fires).

Having retreated back to the sitting area, Alejandro soon followed with mugs of coca tea for us all, and began to reflect on his role as a *kamayoq* – as part of this network of experts or ‘specialists’ in certain areas of production who have the responsibility to share their practical knowledge with other *campesinos*.²⁹ Part of the reason for wanting to become a *kamayoq* in the first place, he explained, was to help recover a respect amongst *campesino* communities for their land and water, and for rebuilding what he described as a kind of reciprocal relation of chores between *Pachamama* (Mother Earth) and human labour. Yet he was also motivated by a desire to learn new techniques in raising alpacas, in managing crops, and in improving his living conditions – techniques that he said go beyond those usually handed down from parents

²⁸ Enrique Mayer (2002) addressed the role of this husband-wife team, ultimately rejecting its romanticization. He illustrated, for example, the distinction between the male domain of extra-household reciprocity in productive labour and the female domain of intra-household reciprocity in the kitchen (which is not to say that the kitchen is necessarily entirely oppressive, suggesting a more complex relation between the domestic space, gender, and power (Meah, 2014)). Nonetheless, Mayer noted that gender roles have historically evolved as a gradual process in Andean households, with gender distinctions remaining undifferentiated during young and old ages; it was perhaps just the ‘productive’ years of adult life that produced gender divisions in the Andes.

²⁹ For an elaboration of how such ‘extensionists’ or ‘specialists’ fit within Practical Action’s approach, see de la Torre (2004), Hellin (2008), or Coupe (2009).

or grandparents. As I later explain, this tension between new and old – between technical and cultural interpretations of knowledge and agrarian practice – has come to define the role of the *kamayoq* as ‘transcultural bridges’.

With Alejandro’s mention of techniques, however, the Soluciones Prácticas staff quickly moved the conversation to some of his household technologies. We moved to an adjacent building – one of the newer concrete structures, lacking the curvatures of adobe that gave his initial home the typical, rustic mountain aesthetic. A television, DVD player, and radio caught my eye as we entered, but Alejandro was keen to show us another piece of technology that was set up in front of a bed and surrounded by bags of alpaca wool. It was a small spinning machine used for the important task of separating wool of different qualities into small spools that would be transported for retail at the closest market in Sicuani, some three hours away by *combi* (a small, usually overloaded minibus also known as a *colectivo*) along one of the narrow *trochas* that snake across the planes and through the passes, connecting disparate towns and villages. Like the sound system, this spinning machine (along with the host of electronics) was powered by the photovoltaic panel outside, which generated power to a small storage unit. The advantage of directing power to the spinning machine, Alejandro explained while manipulating the wool in one hand, directing the machine with the other, and controlling the speed with his left foot, is a substantial increase in productivity and potential revenue.

The machine of course improves efficiency in the process of separating wool, reducing the necessary expended labour-time and increasing surplus value by creating an upward shift in potential exchange value. Separating the alpaca wool into various grades – on a scale from ‘royal’ to ‘thick’ wool – enables Alejandro to demand the maximum price possible for each grade; lumped together, the wool is only as valuable in exchange as the common denominator, the lowest grade of wool in the spool. What happens to the surplus value created by the machine, however, depends on the direction Alejandro chooses for his newly bagged commodity. One option is to send the wool to local markets, via local collectors who ultimately sell to intermediary buyers usually tied to the representatives of the large industry leaders based in Arequipa. A second option is to work with his neighbouring *alpaqueros* (alpaca herders) to collectively pool their resources, potentially selling their wool for a higher price directly to industry representatives by evading local collectors and intermediary buyers. In chapter six, I explore the effects of this limited choice – of personally travelling many hours to sell wool to powerful local collectors, or of pooling resources in alpaca producer’s

associations – and how it has come to characterize pastoral livelihoods and the alpaca industry of the Sierra Sur.

In the time it had taken Alejandro to show us his spooling machine, the sporadic precipitation outside had taken another break, and the remainder of the day's sun was beginning to melt the thin layer of frosty snow that now surrounded his home and had showered his indifferent alpaca herd. This break in the weather gave Alejandro time to show us the rest of his *kancha*: two 'dry' latrines, which separate urine from faeces, allowing the latter to be dried and converted into fuel for heating and cooking; a waste management system consisting of pit-row composting and the separation of recyclables; a traditional system for drying adobe bricks, which he now used to build animal shelters and his more remote *cabañas*; and, a watering hole catchment system used to guarantee drinking water for his mixed herd of alpacas and llamas.

While Alejandro was not the most remote of *campesinos* who I visited, the dispersed nature of Andean communities and their long distances from market centres means that the technical skills and technological infrastructure on display in his home are a rarity – an anomaly amongst a dispersed population usually more concerned with either subsistence or migrating for paid employment (in nearby urban centres or in mines) than they are in technologically retrofitting their mountain homes. While Alejandro was driven by experimentation and a desire for change, he had not independently arrived at the idea of photovoltaic energy production, dry latrines, and a geometrically sculpted home with concrete walls and steel roofs. They were the product of the kinds of *talleres* (workshops) that we had attended earlier that day and for most of the day before.

Capacity-building workshops are a feature of any modern international development NGO, but Alejandro was part of a particular approach developed by Practical Action and contextually applied by the Latin American arm Soluciones Prácticas. In fact, he is frequently cited as a model case: the narrative above is not typical of the majority of *campesinos* but reflects what Soluciones Prácticas deems to be shining example of the success of its interventions and particular methodologies. Alejandro was part of Proyecto Allimpac, which largely focused on promoting renewable energy technologies such as the small photovoltaic panel that rose above his home. The *talleres* of Proyecto Allimpac usually involved a designation of Soluciones Prácticas staff, often consisting of a combination of technical engineers, community mobilisers, and programme co-ordinators or managers, who would

arrive at rural communities from the relatively nearby town of Sicuani, or from places further afield such as Cusco or Lima. In the low light of morning – having walked several hours from their homes and hamlets – *campesinos* would arrive at a community centre in the largest of the surrounding communities, where Soluciones Prácticas would present new projects, train the *campesinos* in new technologies, or more rarely engage in deeper forms of bottom-up research to establish the livelihood needs of these remote communities.

The unique model of training developed by Soluciones Prácticas revolved around *kamayoq* such as Alejandro. As I explain in chapter three, the history of these individuals – and indeed the phenomenon of the *kamayoq* – is complex. The purpose of incorporating them into Proyecto Allimpac, however, was two-fold. First, part of the project was dedicated to actively training the *kamayoq* in new technological capabilities; namely, renewable technologies such as photovoltaic panels. Second, the rationale of the project relied upon the existing networks of knowledge exchange that had been established by the *kamayoq* – both as a historically embedded and ‘culturally appropriate’ way of sharing knowledge, and as part of NGO strategies of horizontal ‘technical extension’ according to a *campesino-a-campesino* (farmer-to-farmer) methodology.³⁰ These networks were to be used as a mechanism for further distributing the technical know-how – knowledge-in-practice – associated with renewable technologies.

Alejandro seemed acutely aware that he is a product of this strategy, as were many *kamayoq*. Often the first comments made to me by *kamayoq* would be words of gratitude towards Soluciones Prácticas for having welcomed these *kamayoq* into training sessions, and having opened the doors to new avenues of livelihood freedom and sustainability. Today, I am still unsure about the combination of factors influencing this overt display of gratitude: was it simply humility, from Andean cultural norms of expressing respect to teachers and ‘the wise’ (*amauta*), and/or from a performance designed to ensure continued participation in Soluciones Prácticas programmes? Nonetheless, these *kamayoq* expressed genuine sentiments towards Escuela de *Kamayoq* (*Kamayoq* School) – a capacity-building and training programme

³⁰ Carlos de la Torre – who dedicated much of his career to Soluciones Prácticas – depicted the *campesino-a-campesino* model as “culturally appropriate” and *kamayoq* as “transcultural bridges” (interview, 15 July 2011; 2004, p. 28). Having worked with *kamayoq* for over three decades, Carlos was described by one *kamayoq* as the “godfather” of the *Kamayoq* School that he helped establish.

established by Soluciones Prácticas, which has recently evolved into the more encompassing approach of el Centro de Innovación y Agro-negocios Rurales (CIAR; Centre for Rural Innovation and Agribusiness).

Escuela de *Kamayoyq* was established in 1996 as part of Soluciones Prácticas' culturally inflected approach to farmer-to-farmer knowledge exchange and participatory technology development. Proyecto Allimpac fits within this programmatic model, as it both trains and relies on the *kamayoyq* as established, and locally respected, knowledge mobilisers and practical educators. Soluciones Prácticas has therefore culturally refined the approach of farmer-to-farmer knowledge exchange, which is a particular articulation of Practical Action's commitment to participatory technology development (PTD). Both broad approaches are justified by loose references to Brazilian educational philosopher Paulo Freire's work *Pedagogy of the Oppressed* (2005 [1970]), which was originally published three years before E. Fritz Schumacher's *Small is Beautiful* (1973). While the former has shaped Practical Action's approach of working with farmers to generate solutions to "real agricultural problems" (de la Torre Postigo, 2004, p. 11), the latter originally founded Practical Action as *Intermediate Technology* in 1966. The purpose was to promote the development and transfer of appropriate (or intermediate) technologies in developing countries, with the aim of stemming the tide of large-scale capitalist technological expansion and replacing it with the horizontal sharing and application of purposeful technologies.³¹

Participatory technology development and farmer-to-farmer knowledge sharing have therefore been a part of Practical Action's international interventions for decades. It was the 'participatory turn' in development studies of the 1980s, however, that saw the entrenchment

³¹ While I try to avoid to dichotomous language of developed/developing altogether, in contrast to critics such as Arturo Escobar (1995), I generally favour the term 'developing countries' over 'Third world'. I do not wish to imply a linear, stagist approach to development that is based on the previous experience of 'developed countries'; moreover, Wainwright (2008) has illustrated the complexity of the term development. Nonetheless, it avoids the awkward hierarchical connotation of a 'Third World', as well as the imaginary singular and linear continuum of 'less developed' to 'developed'. Likewise the terms 'under-developed' and 'dependent' merely reinforce an oppositional relation between a 'Third' and a 'First' World (Bhabha, 2004; Cardoso & Enzo, 1979). While 'Western world' makes sense in critical discussions of modernity and notions of development derived from the Enlightenment (e.g. Escobar, 2008; Esteva & Prakash, 1989), the term loses logical appeal as a more universal term when we place it into the real, contemporary global context of power and development. Where I use 'Western', then, I am following its adoption in discussions of decolonizing development, using it to refer to the colonial process of imposing hegemonic worldviews derived from European philosophies often – but not always – derived from the Enlightenment.

of these methodologies throughout international development NGOs, thereby facilitating Practical Action's resurgence from the fringes of non-governmental action (then known as the Intermediate Technology Development Group – ITDG). Farmer-to-farmer knowledge exchange thus became the centrepiece of Practical Action's approach, which more recently evolved into a commitment to community-based extension systems (CBES).³² The Latin American arm of Soluciones Prácticas was well placed to roll out the programme of farmer-to-farmer knowledge exchange through the already established notion of *campesino-a-campesino* development – a concept that had become popular among NGOs in Peru pursuing 'culturally appropriate' forms of rural development.

Alejandro's role, therefore, didn't stop at participation in capacity-building sessions, or even in his immaculate replication of the techniques and technologies professed by Soluciones Prácticas staff. As a *kamayoq*, Alejandro has a deeper commitment – one that is bound within Andean histories of knowledge reciprocity and collectivism, and yet which has experienced a practical revival and renewed intellectual interest due to the interventions of various government and non-government programmes in the Sierra Sur (at times funded by international donors). While self-perceptions among the *kamayoq* vary – as I explain in chapter four – their role within NGO development programmes requires that they not only replicate the technical processes and technologies demonstrated by programme staff; they must also replicate the very process of knowledge communication and education. Historically, *kamayoq* have been involved in locally embedded forms of practical training and learning; today, they are largely put to work by NGOs seeking to extend their 'peer-to-peer' training programmes (see chapters three and four).

After attending NGO training sessions, passing the necessary practical and theoretical tests of Escuela de *Kamayoq*, and adequately replicating the 'appropriate' technologies approved by Soluciones Prácticas, Alejandro received an official-looking but largely informal document from Soluciones Prácticas, testifying to his status as a *kamayoq*. His next task as a *kamayoq* is to replicate this process – while adding his own personal-cultural inflection – by 'extending' his expertise to his fellow *campesinos*. This process takes place in the field amongst the herds and pastures of either Alejandro or his *vecinos* (neighbours), which

³² For an elaboration of the CBES model within Practical Action's overall approach, see Warburton, Blake, Coupe, Pasteur, & Phillips (2011).

constitute both the subject and means of this form of practical education, known as *aprender hacer*. While the phrase translates directly as ‘to learn to do’, it is used colloquially to refer to the continuous process of learning-by-doing (*aprender haciendo*). In chapters four and five I explain the significance of this processual understanding of Andean knowledge, as well as the implications of a recent conceptual shift to a more static form of *saber hacer* (to know how to do, or ‘know how’). For Alejandro, however, it means making himself available to demonstrate his technical knowledge either by welcoming his *vecinos* (or even more remote *campesinos* from other communities) to his land, or by travelling often large distances by foot to help with specific technical issues relating to pastoral livelihoods, animal husbandry, renewable technology, or any of the other skills he has gained from participation in Soluciones Prácticas programmes.

Alejandro has been involved in many of the projects that preceded Proyecto Allimpac, thereby ensuring that his knowledge is not restricted to recently-introduced technologies but encompasses a broader suite of livelihood capabilities (in chapter four I explain the different streams of *kamayoq* training that Soluciones Prácticas has developed over the past three decades). Yet the most common requests for assistance, Alejandro explained to me once while demonstrating how a knowledge-sharing activity usually works, usually revolve around animal husbandry – improving animal health, breeding, and productivity.

Alejandro and his *compañeros* (fellow *campesinos*) are therefore not the only actors in this scene of horizontal knowledge sharing; at the centre of Alejandro’s demonstration were a few alpacas that had been plucked from the herd like audience members at a magic show. As a domesticated camelid of South American origin, the alpaca has been an important component of Andean life for centuries – both materially and symbolically.³³ As I explain in chapter seven, this long history continues to affect human-alpaca relations in the twenty-first century, yet it does so within the context of a proliferation of bio-technological processes aimed to improve reproduction and animal ‘quality’. The *kamayoq* are increasingly placed at the centre of this enfolding combination of genetic science, customary forms of animal husbandry, an

³³ There are four species of South American camelid (*Camelinae*), divided according to the *Lama* genus and the *Vicugna* genus. Under the former, the llama (*Lama glama*) is the domestic cousin of the wild guanaco (*Lama guanicoe*). Under the latter, huacaya and suri alpacas (*Vicugna pacos*) are the domesticated cousins of the wild vicuña (*Vicugna vicugna*).

uneven alpaca industry, traditional pastoral livelihoods, and the cultural values and biological traits associated with the genus *Vicugna*.

Despite allusions by Soluciones Prácticas to the horizontal nature of the *campesino-a-campesino* model, the networks within which *kamayoq* such as Alejandro operate are increasingly taking on a vertical dimension. In addition to the influence of transnational NGOs such as Practical Action/Soluciones Prácticas and the large enterprises of the alpaca industry, the Peruvian government has taken a more pro-active role in shaping the future of rural development through peer-to-peer communication and adult education. The introduction of IPEBA (*Instituto Peruano de Evaluación, Acreditación y Certificación de la Calidad de Educación Básica*), for example, reflects the insertion of *kamayoq* into a centrally governed system for ‘certifying’ and professionalizing rural extensionists and livestock promoters.³⁴ To gain formal IPEBA certification, each *kamayoq* must pass a combined practical and theoretical examination, which tests *kamayoq* knowledge according to a list of indicators, established through the collaboration of a variety of government and non-government agencies, and with the participation of *kamayoq* themselves. Questions therefore arise as to the precise horizontality of the current *campesino-a-campesino* model and its implementation, as well as to where the model fits within a broader paradigm of inter-cultural and bilingual adult education being promoted by the Peruvian state as part of its innovative strategies of development and social inclusion. I turn to these questions in chapter five, exploring the tensions and overlaps between the ‘culturally appropriate’ work of the *kamayoq* and their politicized role as ‘ethnic experts’ within the globalized ethnodevelopment constellation.

Kamayoq: between the globalized ethnodevelopment constellation and the decolonial option

Alejandro’s situation is not necessarily representative or typical of all the *kamayoq*; his is a success story for Soluciones Prácticas, which I used as an example of how the *kamayoq* are tied to the developmental aspirations of a variety of actors within the multi-scalar networks

³⁴ As I elaborate in chapter five, since conducting my research, IPEBA has been subsumed within the broader, over-arching institute of SINEACE (*Sistema Nacional de Evaluación, Acreditación y Certificación de la Calidad Educativa*), which had already operated as a governing body for the national system of overseeing educational reform.

that increasingly characterize the Sierra Sur. While I cannot make generalizable conclusions based on Alejandro's personal situation, it helps to illuminate the networked relations that characterize development processes in the region. In chapter three, I illustrate the historical constitution of the roles played by *kamayoq* such as Alejandro, which are tied to the variable positions that *kamayoq* assumed under different modes of production across centuries. Yet Alejandro was 'formed' as a *kamayoq* through his involvement in the capacity building and training programme of Escuela de *Kamayoq*, itself a product of Soluciones Prácticas' contextual interpretation and implementation of Practical Action's organization-wide programme of farmer-to-farmer knowledge extension.³⁵ This programme emerged as part of the 'participatory turn' of development in the 1980s, which produced critiques of technology-focussed development and drew upon post-development arguments for greater attention to plurality and difference. Emphasis was placed on developing 'bottom-up' approaches to development, on turning the development model on its head to put the last first, as well as the first last (Chambers, 1983, 1997). In conjunction, paternalistic development prescriptions gave way to a 'farmer first' approach that not only grounded the idea of agricultural and productive improvements in the reality of farmers' everyday lives, but arguably empowered these farmers to develop their own solutions to their contextual problems.

While the resulting paradigm grew through various critical interventions (Chambers, Pacey, & Thrupp, 1989; Scoones & Thompson, 1994, 2009), organizations such as Soluciones Prácticas have continued to refine their participatory, horizontal approaches to agricultural knowledge extension. Escuela de *kamayoq*, for example, has evolved into the Centre for Rural Innovation and Agribusiness (CIAR), which reflects Practical Action's broader shift from participatory technology development and farmer-to-farmer technical extension to the notion of community-based extensions systems. These shifts reflect an attempt to locate horizontal models of knowledge exchange within broader innovation systems, including market interactions and the institutional and policy environment, necessitating an understanding of integrated, hybrid forms of contested and situated knowledges continuously in the making (Scoones & Thompson, 2009). The role of the *kamayoq*, then, has evolved from a local,

³⁵ My use of 'formed' reflects the vernacular of development programmes in the Sierra Sur, which focus on "*la formación de los kamayos*" and "*kamayos formados*". My interpretation was intentionally literal in order to highlight the hierarchical power relations of *kamayoq* training. *Formación*, however, can also be translated as 'training' and *formados* as 'trained'.

culturally inflected articulation of peer-to-peer knowledge exchange, to a systematic form of extension designed to build culturally appropriate forms of knowledge, while simultaneously preparing rural households for their insertion into the markets, institutions, and policies that characterize the broader field of agricultural development and ‘innovation’. The recent emergence of the Peruvian national system of certification, developed and governed by the national institutes of SINEACE and IPEBA, is a testament to this shift, as *kamayoq* are inserted into a more general network of rural extensionists and livestock promoters, tasked with filling the gaps in rural service provision that have persisted since neoliberal restructuring in the 1990s. This national system (which I explore in detail in chapter five) seeks to preserve the cultural function of the *kamayoq* in the Sierra Sur, while also developing universal attributes in the exchange of technical and agricultural knowledge.

The *kamayoq* therefore fit within a newly emerging constellation of development in the Peruvian Andes. I use constellation as a metaphor as it ties together some of the cultural-symbolic components that historically underpin the role of the *kamayoq*, with a contemporary focus on the dynamic evolution of (globalized) development networks. These links will become increasingly clear in chapter three, and I will mobilize them most explicitly in chapter seven. Suffice to say at this point that pre-Hispanic societies were intimately connected to the *Yacana*, a camelid-shaped constellation that – in Andean mythology – descended to earth to animate and breath life into the various components of the nonhuman world that underpinned regionalized systems of production and reproduction. The *kamayoq* had a special relationship with this *Yacana*. Today, a new *yacana* has begun to emerge, as the *kamayoq* link cultural systems of reproduction with the globalized forms of biotechnological science associated with the livestock sector (see chapter seven).

The point is that the broader constellation of development, within which the *kamayoq* concept and practice continues to unfold, is increasingly shaped by plural cultural aspirations for development. As development geographer Sarah Radcliffe (2006) pointed out, “culture increasingly represents a key factor in development outcomes, increasing the meaningfulness of interventions”. However, it does so within the broader political-economic structures that condition the globalized development constellation:

Culture comprises the material products, patterns of social relations, and structures of feelings produced by multiple actors, who are differentially positioned in power relations, political economies, and social reproduction. Viewing culture in this way recognizes the contested nature of cultural meanings, artefacts, and social relations that are coproduced by diverse

actors in their ongoing daily interactions. The spatial and social limits of culture are thus dynamic, reflecting the ways in which social interactions are rarely bounded, while the fields within which meanings and social relations are produced go beyond the local or indeed national arena (Radcliffe, 2006, p. 16).

Building an analysis of the *kamayog* phenomenon therefore means locating it within an emerging cultural development paradigm. The policy trend of promoting this paradigm has often been referred to as ‘neoliberal multiculturalism’ – a term often credited to the work of Charles Hale (2002, 2005), and used to describe how the broader project of ‘inclusive neoliberalism’ (Craig & Porter, 2006) responded to the needs and demands of indigenous populations while maintaining (and disciplining) them within the neoliberal order. A “boomerang effect” (Keck & Sikkink, 1998) subsequently took hold as forms of collective action began to push back against these neoliberal reforms and the increased vulnerability they produced. The consequence was a wave of constitutional reforms in Latin America (particularly in the Andean countries), which enacted a shift from policies of indigenous assimilation to a program of multiculturalism (Muehlmann, 2009). Indigenous peoples became firmly established as subjects of rights in both the domestic and international legal spheres, enabling them to pursue rights-based claims in order to gain cultural and social autonomy, as well as equal access to basic services. At the same time, however, neoliberal regimes – including international agencies, such as the World Bank – also inserted the multicultural agenda into their ever-expanding armoury of policies for ‘social’ or ‘inclusive’ neoliberalism. Techniques of disciplining agency and monitoring performance were increasingly being applied to regulate indigenous development subjects according to neoliberal market rationales (Andolina et al., 2009).

In this context, multiculturalism has been deemed fundamental to the broader, hegemonic project of neoliberalism, as the state has been able to intervene in new ways, using innovative discourses to re-orient multicultural agendas towards neoliberal logics that ultimately acts as a technology of domination over individual subjectivities (Hale, 2002, 2005; Sieder, 2002). However, recent work has moved beyond analyses of the effects of neoliberalism on the agency of (ethnic) subjects, to explore how groups previously deemed barriers to neoliberal development have become valuable to state and regional development initiatives. In this sense, as Monica deHart (2010) has argued, ethnic subjects and subjectivities are beginning to shape the neoliberal projects that have previously simply worked upon them. Likewise, for Nancy Postero the result is a “new form of protagonism that both incorporates and challenges the

underlying philosophies of neoliberalism” (Postero, 2007, p. 18). This ‘postmulticultural citizenship’, she argued, is emerging in Bolivia from: an end to developmentalism; the resurgence of indigenous politics simultaneously through and in response to neoliberal multiculturalism; the emergence of movement alliances across sectors; and, the re-assertion of citizenship (Postero, 2007). Paradoxically, neoliberal multiculturalism helped to create the conditions that enabled already shifting state-civil society relations and multi-sector alliances to establish forms of governance rooted in Andean culture (Yates & Bakker, 2014).

By contrast, literature on new social movements has stressed the autonomy of indigenous concerns in the Andean region, pointing to the powerful rise of movement coalitions in Ecuador and Bolivia. These movements challenge existing political and economic systems in the region, as well as prevailing definitions of citizenship, democracy, and participation, thereby contesting the power and policies of entrenched, dominant classes and social groups (Stahler-Sholk, Vanden, & Kuecker, 2007). The political trajectory in Peru, however, is often separated out from these regional movements, and the country is placed alongside Colombia and Mexico in the list of Latin American countries staying the course of a neoliberal development model deemed to be in-line with US imperialism (Petras & Veltmeyer, 2011). While a series of issue-based movements have evolved in Peru, particularly focussing on the impacts of mineral extraction on Andean, Amazonian, and Afro-Peruvian communities, these movements have largely failed to affect the macro-political status quo in the country.³⁶ This limited impact is particularly apparent in the Sierra Sur, perhaps due to recent histories of terrorism and particularly compared to the momentum of movements in Amazonian areas.

The marriage of neoliberalism and multiculturalism has not, therefore, always been read in the same way. Shannon Speed (2005), for example, has cautioned against easily accepting narratives of individualism within neoliberalism, as these narratives risk mischaracterizing all groups that pursue collective rights as inherently anti-neoliberal. Indeed, recent scholarship on the recognition of collective indigenous title – such as *Tierras Comunitarias de Origen*

³⁶ Movements in Peru include: CONAPA - Comisión Nacional de Pueblos Andinos, Amazónicos y Afroperuanos (National Commission on Andean, Amazon and Afro Peruvian Communities); CONACAMI - Confederación Nacional de Comunidades del Perú Afectadas por la Minería (National Confederation of Peruvian Communities Affected by Mining); AIDSESEP - Asociación Interétnica de Desarrollo de la Selva Peruana (Interethnic Association for the Development of the Peruvian Rainforest); CONAIP - Confederación de Nacionalidades Amazónicas del Perú (Confederation of Amazonian Nationalities of Peru).

(Community Lands of Origin; TCOs) in Bolivia – has pointed to the congruency of collectivism with neoliberal logics. As John and Jean Comaroff (2009, p. 81) put it, these “territorial claims turn history into geography, sedimenting restless pasts into the stable fixities demanded for framing-and-claiming an ethnic identity”. Anthias and Radcliffe (2013) illustrated that these spatial fixities emerge within a patchwork (variegated) space of collective, private, and undefined property rights, where neoliberalism operates alongside and often in articulation with indigenous cultural practices (an argument I explore further in chapter six).

In conjunction with the participatory turn, therefore, the 1980s also marked the beginning of a period in which neoliberal development – as a body of scholarship and practice – began to take indigenous people and cultures into account to an unprecedented extent, seeking to “bring economic development and cultural goals into harmony” (Radcliffe & Laurie, 2006b, p. 91). As it evolved, this field moved away from stark (and erroneous) dichotomies of Western and Indigenous culture, as indigenous actors have increasingly stressed their own subjectivities as always “shuttling between discourses”, pointing to difficulties of representation and of ‘being’ indigenous (Valdivia, 2005, p. 299). Yet the shift in treatment of indigenous cultures within development studies also coincided with the deepening hegemony of a globalized neoliberal development paradigm, *and* a shift within this development paradigm that saw social and cultural issues absorbed within its expanding (yet still economic-centric) remit. The notion of ‘neoliberal multiculturalism’ therefore only goes so far in explaining how these relations take shape on the ground. Here, I expand on the related, but specifically normative paradigm of ‘ethnodevelopment’, which – as I explained in chapter one – I use in order to capture the simultaneous process of instrumentalizing and protecting cultural practices through development programmes.

Use of the ethnodevelopment term in a Latin American context can be traced to Mexican sociologist Rodolfo Stavenhagen, who used the term to refer both to “the development of ethnic groups within the framework of the larger society” and to a “dynamic, creative process which will liberate collective energies for development” (Stavenhagen, 1986, pp. 92-93). Thus, the term reflects an inherent contradiction between the maintenance of the “framework of the larger society” and the “reaffirmation of Indian cultural values and a revaluation of the position of Indians within the social structure” (Stavenhagen, 1986, p. 93). The defining feature of ethnodevelopment, then, is that culture and ethnicity are put to work and

(ostensibly) protected by the development constellation. This can happen with or without a substantive engagement with cultural diversity or ethnic identities.

In exploring this paradox of the ethnodevelopment paradigm and the contradictory effects of a cultural turn in development, Andolina, Laurie, and Radcliffe (2009) developed a two-fold conceptualization of ethnodevelopment: an instrumentalization of culture; and, more plural and creative notions of culture that are capable of providing a platform for autonomous and dynamic action by diverse groups. Addressing the first interpretation, Radcliffe and Laurie (2006a) had previously identified the persistence of two instrumentalist uses of culture in contemporary ethnodevelopment paradigms: culture as a resource, and culture as an institution. Andeanism, they argued, remains caught within racial dualisms that yield stereotypes of archaic and primitive populations, as well as romanticizations of distinctive socio-economic and cultural patterns (Andolina et al., 2009). The restricted nature of the ethnodevelopment 'template' therefore revolves around two contrasting narratives: poverty and isolation; and, empowerment and connectivity.

The first presents an essentialist vision of (economic) poverty as an inherently Andean trait, while it simultaneously points to culture as a form of social capital capable of providing an indigenous route to development. Andean-ness is presented in terms of vulnerability and inherent poverty, thereby incarcerating indigenous populations both spatially and conceptually (Appadurai, 1988), and reproducing the "hyperreal Indian" (Ramos, 1994) as an object of idealistic development interventions. The second emphasis on social capital that grew towards the end of the twentieth century has put a new discursive slant on this ethnodevelopment paradigm, combining with instrumental views of culture to "redefine tradition as a feature relevant to contemporary social life and future progress" (Andolina et al., 2009, p. 62). Focus has therefore shifted to potential ways of building on, rather than displacing, elements such as non-monetary exchange and reciprocity, ancestral and traditional knowledge, and identity and attachments to territory. In this sense, the strengthening of social capital is regarded as a way of *both* stimulating economic growth *and* retaining indigenous cultures, thereby achieving a form of 'culturally appropriate development'.

Despite the positive recognition that culture and ethnicity are not barriers to development, this ethnodevelopment paradigm reinforces Andeanism as a racial project. According to Radcliffe, Laurie, and Andolina (2009, pp. 64-71), this manifests in three ways. First, indigenous people are constructed in relation to the market, with culture conceived as the

‘capital of the poor’. The previously dominant dichotomy of modern (entrepreneurial, white) versus traditional (indigenous, non-entrepreneurial) has shifted to a ‘sliding scale’ of entrepreneurial potential. Indigenous culture has been reconceived as rich in social capital, and as a resource for generating income and creating dynamic links to a global market. This shift can be seen in various contexts of inserting a commodified form of indigeneity into capitalist markets, as documented by the likes of Monica deHart (2010), John and Jean Comaroff (2009), and María Elena García (2010).

Second, indigenous civil society is often partitioned from broader society and markets according to notions of difference. Focus is placed on indigenous institutions and social networks organized according to ‘traditional’ values, such as reciprocity and rotating leadership (see chapters three and six for my own critique of such perspectives). Community-level development is seen as a way of strengthening inherent social relations in order to support new forms of economic development. However, this approach simply extends the ‘black box’ model of households to the community scale or ethnic group, simultaneously reifying notions of indigeneity as ‘local’.

Third, ethnodevelopment paradigms construct the development potential of indigenous culture in terms of authenticity, thereby policing categorical differences between cultural groups, naturalizing reciprocity and collectiveness (seen as inherently indigenous), ignoring the fraught internal politics of indigenous governance systems, and inviting approaches that require the performance of indigeneity in order to access resources and services (Andolina et al., 2009; Hale, 2002; Muehlmann, 2013). These approaches – and the first conceptualization of ethnodevelopment in general – therefore expose ethnodevelopment to the kinds of critiques commonly voiced in relation to neoliberal multiculturalism as a ‘container’ for indigeneity. As Karen Engle (2010) explained, this side of ethnodevelopment, which was once a radical critique of state and international development policy, has evolved into a less critical bystander to the neoliberal reforms that have proliferated since the 1990s. Where does this leave the ethnodevelopment framework in terms of its ability to shed light on the coming together of transnational development organizations and the culturally contextual, grounded phenomenon of the *kamayoq*?

In contrast to the aforementioned essentializing ethnodevelopment paradigms, Radcliffe, Laurie, and Andolina propose an alternative that is based on flexible notions of culture, which downplay the role of social capital as an instrumental guiding principle for development

planning. To overcome the limitations of the first form of ethnodevelopment, they argue, we must harness a view of culture as multiple, and of development as a set of culturally embedded practices and meanings (Radcliffe & Laurie, 2006a). This approach “articulates concerns with indigenous rights, structural constraints...beneficiary self-identification, trans- and multiscalar connections, and inter-ethnic and cross-class relations” (Andolina et al., 2009, p. 71). It therefore offers the opportunity for overcoming both the categorical difference and economic instrumentalization associated with the first ethnodevelopment paradigm, looking to bottom-up constructions of indigenous identities and how they intersect with the multi-scalar and multi-sited nature of indigenous livelihoods and political articulations. When culture is conceived as a pluralized expression of creativity, it “can be the basis for innovative forms of social organization and meanings that can be adapted over time as they represent a dynamic template for action” (Radcliffe & Laurie, 2006a, pp. 244-245). The purpose of this approach is to open-up more plural spaces of decision-making and to regard indigenous culture as a “basis for creative thinking outside of standard development solutions” (Andolina et al., 2009, p. 74). While the first ethnodevelopment paradigm aims to link indigenous social capital to greater participation in economic markets, the second develops “cross-cultural and multiethnic networks to foment political and economic empowerment” (Andolina et al., 2009, p. 76). A specific focus of this approach is therefore on how transnational intersections confront stereotypes of indigenous populations as rooted to place and intentionally withdrawn from broader development trajectories.

Part of Andolina et al.’s approach, then, is to identify and prioritize plural forms of culture and development, without artificially separating these elements out from the market processes of a globalized development paradigm within which they participate (however marginally). Nonetheless, their account illustrates the difficulty of exploring plural forms of development without defining them *only* in relation to a broader, monolithically conceived Western neoliberal development paradigm. One of the reasons for the difficulty of maintaining “empowering and appropriate forms of indigenous development”, they argue, “is the embedding and framing of indigenous development within social-liberal agendas, with their attendant forms of governance and differentiation” (Andolina et al., 2009, p. 221). Ultimately, having rejected the de-colonial perspectives of organizations such as PRATEC on the grounds of Andean romanticism (see chapter one), their account of indigenous movements is arguably focussed on the transnational networks in which these movements participate and which they

co-determine. While these networks of a globalized ethnodevelopment constellation are certainly relevant for an analysis of the *kamayaq*, given the phenomenon's long history (see chapter three) here I attempt to identify how the plural forms of culture as creativity alluded to by Andolina et al. might come about. This understanding is required if we are to fully conceive of how Rodolfo Stavenhagen's processes of indigenous cultural re-affirmation and re-valuation might emerge.

The plural, creative conception of culture entails a struggle for autonomy and self-determination in order both to participate in and re-shape existing development paradigms, and to explore potential alternatives to Western, neo-colonial models. PRATEC and its collaborators have developed two overlapping bodies of literature that have expanded on these issues and which are relevant for an analysis of the *kamayaq*: cultural explorations of decolonization (including of socio-economic arrangements); and a focus on inter-cultural education for a re-affirmation of the Andean community (including its position within nature and agro-biodiversity). Eduardo Grillo (1998a, 1998b) contrasted the first emphasis on decolonization and cultural re-affirmation to the Western 'architecture of development', with its singular utopian vision, unequal power, systemic poverty, and Imperialist imposition of order.³⁷ Opposing this architecture in the Andes, Grillo suggested, are four fundamental components: nurturance, equivalence, protection, and harmony. Decolonization is a project of re-asserting the autonomy and diversity of Andean cosmovisions and lifeworlds, thereby reproducing a collective identity of reciprocity that exists according to a state of equivalence (conceived as equality with diversity). This equivalence must be protected in institutionalized forms such as the *ayllu*, and harmony emerges by nurturing the diverse, favourable conditions for life that are unique to each *ayllu*. The *ayllu* – which I explore further in chapter three – is an Andean form of social organization often simplistically equated to the western notion of a community, which in fact affiliates diverse human and nonhuman social groups, and involves mutually reinforcing administrative, ritual, and economic practices (Orta, 2013). Grimaldo Rengifo (1998) has gone further to suggest that it is in fact a self-reproducing, yet diverse entity that exists in direct opposition to Eurocentric, colonial, and anthropocentric notions of

³⁷ As Eduardo Grillo would acknowledge, and indeed elaborated, the Western architecture of development is equally as complex as an Andean way of being. The problem lies in the fact that the fundamental incompatibilities between the two are shrouded behind the hegemonic status of the Western order.

homogenous community forms. From these *ayllus*, Grillo argued, harmony builds outwards via horizontal networks. Ultimately, decolonization entails the conditions of autonomy necessary to support the recovery of these forms of cultural affirmation, thus reflecting a break from the colonial bonds that have suppressed these elements until now. In chapters three and six, however, I raise the question of whether the a-critical re-adoption of these cultural articulations risks artificially separating them from the broader (colonial) social relations, networks, and discourses through which they now take shape.

Andean decolonization has also addressed issues of socio-economic organization, which I address explicitly in chapter six. In this context, in collaborating with PRATEC, Harvard economist Stephen Marglin (2000) explored whether the decolonial option in the Andes could produce a kind of popular ecological-economy capable of overcoming the individualism, rational self-interest, and unlimited desires that he argues underpin a hegemonic Western form of capitalist development. Fundamental to this decolonial option is a reaffirmation of the agrarian economies of the Andes and their ecological basis on an Andean living community, which is held together by reciprocal relations between human and nonhuman natures. Andean knowledge, Grimaldo Rengifo argued, is central to upholding such an Andean living community: “to be wise in this world is to have the ability to nurture, to be able to tune and join oneself to the conversations, practices, and gestures of others [including nonhumans], to be able to leave yourself to be cultivated, and not feel like the king of creation but to be one in this world” (Rengifo Vasquez, 2009, pp. 41, my translation). Conceived in this way, Andean knowledge is seen as relationally dynamic, as always in flux according to a recursive and inter-dependent relationship with the surrounding more-than-human living world. The inevitable question for the *kamayoaq* is whether they uphold such a relational and dynamic conception of knowledge, especially given their increasingly close relationship with international development NGOs and the Peruvian state.

Nonetheless, PRATEC places a dynamic form of knowledge at the centre of its second body of work relevant to this dissertation: inter-cultural education and the notion of a ‘*diálogo de saberes*’ (dialogue of knowledges). While part of this work focuses explicitly on the decolonization of institutionalized forms of education (e.g. Bowers, 2002), a dialogue of knowledges points to a more fundamental re-orienting of inter-cultural education around the

notion of *iskay yachay*, which refers to a reciprocal exchange of diverse and multiple knowledges (Rengifo Vasquez, 2008b).³⁸ As I explain in chapter five, when oriented this way inter-cultural education challenges existing structures of education; it prompts a shift away from homogenizing and universalizing forms of literary learning, and towards a (re)generation of practical, experiential, and contextual Andean knowledge (conceived as a process rather than an end product). For PRATEC, a radical form of inter-cultural education that is built on these plural understandings of culture and knowledge is capable of rejecting “the imperialist pretention of homogenizing peoples” (Grillo Fernandez, 1998b, pp. 232-233). When based on principles such as *iskay yachay*, then, inter-cultural education is the praxis of decolonization. In terms of analyzing the role of the *kamayoq*, I explore whether they can help to rebuild these forms of cultural affirmation outwards, by expanding their horizontal networks based on reciprocity of multiple knowledges.

These decolonial perspectives emerging from Peru therefore help to identify some of the more plural understandings of culture alluded to by Andolina et al. (2009). As Pilar Hernández-Wolfe (2013, p. 17) put it, these paradigms help us to “re-signify the multiple overlapping and divergent but coexistent patterns of ethnicity...and epistemic and economic relationships with which we live”. They are examples of what Arturo Escobar has called “border thinking” or “border epistemologies”, in the sense that they attempt “to craft another space for the production of knowledge – an other way of thinking, *un paradigma otro*, the very possibility of talking about ‘worlds and knowledges otherwise’” (Escobar, 2007, p. 179). This body of work therefore regards the boundaries of Western hegemony over knowledge production not as the point where knowledge stops, but as the place from which it begins its essential unfolding (cf. Bhabha, 2004).

However, I also attempt to scratch under the surface of the critiques emanating from this border thinking, which Escobar refers to as the Modernity/Coloniality/Decoloniality (MCD) research collective. The aim of this collective is to generate alternative, decolonial thinking by building on the lived, colonial experiences of diverse Latin American cultural groups and societies; in Walter Mignolo’s (2010, p. 1) words, to build a “contribution to the advancement of de-colonial thinking as a particular kind of critical theory and to the de-colonial option as a

³⁸ *Iskay* translates as more than simply ‘two’ or ‘double’; it is rather a ‘couple of pairs’ (Rengifo Vasquez, 2008a, p. 26). Hence, emphasis is on multiplicity, rather than a simple dualism or duality.

specific orientation of doing”. Nonetheless, in collections such as Mignolo and Escobar’s (2010) *Globalization and the Decolonial Option*, the influence of post-development and post-colonial critiques is clear, despite their instance that they go beyond such critiques to build out from non- or de-colonial contexts (in theory and practice). In that collection, Freya Schiwy (2010) pointed to the difficulty of achieving the latter, as Andean notions of gender remain locked into a paradigm of duality that may be no better placed to challenge the binary and hierarchical constructions of gender that emanate from the West. The deployment of gender dualities in attempts to decolonize, she concluded, fails to interrogate the joint history of colonialism and gender. These strategies risk naturalizing and universalizing existing essentialist categorizations, for example by normalizing gender hierarchies as a product of both colonial and decolonial context. Schiwy’s solution is to turn back to feminist post-structural critiques, thus pointing to the difficulties of marrying critiques of neo- and post-colonial development with generative accounts of decolonial possibilities. As post-colonial and development critic Kiran Asher (2013, p. 840) put it, MCD scholars “gloss over the point that dismantling one axis of power may leave others intact or exacerbate them”.

In this dissertation, therefore, I attempt to navigate the terrain in which the ‘decolonial option’ rubs against the critiques of post-colonial and post-development scholars, as well as the normative terrain of ethnodevelopment. *Kamayoq*, indigenous households and communities, non-government and government programmes operating at and across various scales, and international development agencies all converge in the southern Peruvian Andes. At times, the effects of this convergence include productive and practical improvements to standards of living, livelihoods, and collective wellbeing. At others, socio-cultural and political-economic differentiation is exacerbated, dependency is deepened, and diversity is eroded. In this section, I have outlined ethnodevelopment as a conceptual frame that helps to develop an understanding of these effects – of the contextual and relational unfolding of the material and cultural effects of the globalized development constellation in the Peruvian Sierra Sur. It helps to connect the *kamayoq* both to the constitutive cultural histories through which they now operate, and to the contemporary forms of knowledge and expertise that flow through the circuitry of the development constellation. It helps to illustrate the ways in which the normative – and often essentializing – paradigm of ethnodevelopment, and the more plural and creative paradigm of ethnodevelopment are co-constituted. I explore this co-constitution in the phenomenon of the *kamayoq*.

In the remainder of this chapter, I explore some of the issues that arise in terms of investigating the *kamayoq* as a cultural phenomenon operating within the ethnodevelopment constellation. As David Mosse has argued, development ethnographies must increasingly be multi-*positioned* as well as multi-sited; ethnographers must be explicit and transparent about how they conduct research *as a part of* development networks (Mosse, 2005). This is not to say that development researchers become place-less. Rather, as a member of an international community – of the development constellation – the researcher-actor inevitably ‘touches down’ alongside development policy and practice, affecting and being affected by local contexts and actors. As María Elena García (2000, p. 98) pointed out, “whether we want to or not, our work – our simple presence in the field – contributes to local change”. Part of the challenge is therefore navigating these networked interactions and their effects; as Escobar (2008, p. 11) put it, “how does one reconcile being-in-place and being-in-networks”? Though I do not seek to produce a conclusive or generalizable answer to this question, in the remainder of this chapter I expand on the ways in which my own position intersected with that of the *kamayoq* as I attempted to move within and explore the network of relations that shape the *kamayoq* in practice today.

***Llika* methodologies**

The Quechua term of *llika* draws attention to an amorphous conceptual-methodological frame of my research, which pulls together the multiple definitions of the term: systems, networks, structures, and herds.³⁹ The ‘herd’ appears to be an anomaly here, and yet it speaks volumes as to the kind of ethnography that was required. This was not the kind of herd ethology conducted by Hayden Lorimer (2006, p. 497), whereby following animals “marks the point where ethnography and ethology meet”. According to Lorimer, following the movements of nonhuman beings to compose what he called “microgeographies of worldliness” enables the researcher to get closer to the vital, animate, and lively energies that underpin socionatural landscapes and environments. While this micro-geography would reveal much about *kamayoq*-alpaca relations, for example, it might also close the doors to investigating the multi-scalar workings of the ethnodevelopment constellation that I presented above. Indeed, the

³⁹ *Llika* is defined as: 1. A herd. 2. System or structure. 3. Network. 4. Web, or net.

inclusion of herds in the definition of *llika* points to a networked ontology of Andean living worlds: herds are networks and structures; networks and structures are herds. This is not to say that I view the *llika* simply as a metaphor; rather, it is part of the development constellation in that it participates in shaping future reality and it reflects the particular articulation of ethnodevelopment that I set out to understand. The nonhuman world is therefore also an active part of the network that I sought to travel and understand, meaning that human and nonhuman agents in the network co-produce future realities in different, contextual, and often singular ways. My aim, then, was to explore the contextual and plural outcomes of the ethnodevelopment constellation.

My approach began by trying to understand the work of the *kamayoq* as a particular expression of what Aiwa Ong described as “situated cultural practices” (Ong, 1999, p. 17). As I introduced above, the *kamayoq* are an expression of both a long history of local social practices, traditions, and cultures, as well as an internalization of transnational processes, particularly those associated with the development interventions of international NGOs. Beginning with the notion of situated cultural practices therefore meant paying attention to multiple complex and intersecting issues, including: the everyday practices of the *kamayoq* and how they related to the various forms of knowledge, expertise, and agency embodied by individuals; the cultural and spiritual value embodied in the phenomenon; its ties to nature and Andean-specific understandings of nature; its ties to other cultural phenomenon and other situated practices; its role within relational, multi-scalar networks of governing local development; and, its effect on the material conditions that partly determine livelihoods in the Sierra Sur.

This complexity pointed to the need for a multi-sited ethnography; to position the varied work of the *kamayoq*, I had to explore their roles in different contexts. According to Gillian Hart, “ethnography is most closely associated...with participant observation and long-term, in-depth engagement with specific communities or societies” (G. Hart, 2009, pp. 217-218). A multi-sited ethnography, however, is more than simply replicating this approach a number of times over in different places or communities; of central concern is the tracing of connections across places, scales, and – as I argue in chapter three – time. A mobile ethnography does not simply move sequentially between different places, but rather incorporates a continuous and recursive approach of tracking back and forth between relevant sites, institutions, and actors within the networked (that is to say connected) site of the research field. Contemporary

ethnography necessitates such a multi-sited approach in order to follow connections, associations, and relations; these links and flows distinguish multi-sited ethnographies from comparative studies (Hannerz, 2003). María Elena García encapsulated the need for a multi-sited ethnography to address the complex cultural politics and ethnodevelopmental context of the Peruvian Andes:

Multisited ethnographic analysis is critical for understanding broader (local and global) representations of indigenous organizing, rights activism, and development policies...Moving between rural and urban spaces and across local, national, and international scales not only allows multiple ethnographic vantage points but also makes it possible to trace and track the connections and contradictions of cultural politics. It is more apparent now than ever that culture and politics do not stand still for the ethnographer's steady gaze, but rather dare ethnographers to move unsteadily in various contexts (García, 2005a, pp. 3, 14-15).

I return to some of the methodological demands of developing such a multi-scaled ethnography below; first, however, I elaborate some of the differences between a conventional, single-site ethnography and the networked, multi-sited ethnography that grounded my research over the course of fourteen months in Peru between 2011 and 2013. First, I did not pursue an ethnography of a spatially bounded community, and instead focussed on a community of practice as reflected in the mobile yet situated practices of the *kamayoq* as 'mediators' in development networks – as “actors endowed with the capacity to translate what they transport, to redefine it, redeploy it, and also to betray it” (Latour, 1993, p. 81). This approach reflects a kind of critical ‘ethnomethodology’ that extends beyond the bounds of a typical, spatially bounded ethnography, as it offers “an approach to studying social order and practical reason that discloses how people or ‘members’ produce everyday situations” (Philo, 2009, p. 219). The point is to begin with a recognition that particular places are in part produced by sets of relations and continuous political processes, which are enacted through the practices of “variously positioned people and political economies” (Raffles, 1999, p. 324). As Juliet Erazo (2013) pointed out, this recognition should not equate to a prioritization of local relations over extra-local and potentially transnational articulations and interactions, which also shape places over time. Approaches that ignore these co-dependent relations run the risk of portraying indigenous cultures as internally homogeneous and/or as unable to preserve their culture in the face of interactions with markets or other outside interests and actors. This is equally important when we look at communities of practice, which can often be romanticized according to (historically-constructed) cultural ideals, without recognizing the fact that these

communities of practice are usually far from coherent or homogenous, and are instead made up of the similar kinds of tensions and contradictions that characterise the identity of spatially bounded communities.⁴⁰

Given this focus on communities of practice, the second distinction from a conventional, spatially-defined ethnography points to the need to address “circulations of meanings, objects, and identities in diffuse space-time” (Marcus, 1995, p. 96); to attempt what Ananya Roy (2012) described as an ethnography of circulations. Roy’s approach focussed on exposing the technocrats who circulate within and uphold the apparatus of development; she re-envisioned the kind of development ethnography of networked institutions earlier encapsulated by Michael Watts (2001) and famously put into practice by James Ferguson (1994). Taking inspiration from these approaches, ethnographies of institutions such as the World Bank are increasingly common.⁴¹ To grasp fully the effects of the development constellation, however, we also need to travel the ground upon which these development interventions ‘touch down’. My approach therefore combined attention to the discursive strategies of development deployed by various institutions and agencies, with the ways in which the *kamayog* community of practice shapes and is shaped by this broader discursive terrain. I focused on how the collective endeavour, politic, and identity of the *kamayog* community of practice – however internally fraught and riddled with contradictions it turned out to be – is articulated and connected in a recursive relationship with broader discourses, social practices, and political trajectories.⁴²

The third distinction from conventional ethnographic approaches relates to the continuous mobility required from ethnographies of development. This distinction means selecting from a variety of “following” techniques, which are increasingly used as a means to navigate the “chains, paths, threads, conjunctions, or juxtapositions of locations in which the ethnographer establishes some form of literal, physical presence, with an explicit, posited logic of association or connection among sites that in fact defines the argument of the ethnography”

⁴⁰ For an elaboration on such tensions and contradictions, see, among others: Mosse (2001, 2005); Orta (2013); Panelli (2005); Perreault (2003); and, Staeheli (2008a, 2008b).

⁴¹ For an insightful recent collection of such internal and external critiques of development institutions, see David Mosse’s *Adventures in Aidland* (2011).

⁴² See Muehlmann (2013) and García (2005a) for elaborations on the notion of articulation within the context of multi-sited ethnographies.

(Marcus, 1995, p. 105).⁴³ While I return to the implication of ethnographer (multi)positionality in the following section, Marcus presented six research artefacts worthy of following: people; things; metaphors; plots, stories, or allegories; lives or biographies; and, conflicts. However, it seems reductionist to separate these strategies and artefacts. Take, for example, David Mosse's approach to development ethnography, which has been characterized as "following the project" (Peck & Theodore, 2012, p. 25) and which combines many of Marcus' techniques to address the "complex agency of actors in development at every level" (Mosse, 2005, p. 6).

While Mosse's approach appears discursive – in focussing on *how* rather than *whether* projects succeed or not – it is in fact grounded in everyday interactions at "project interfaces, or 'front lines', the lifeworlds of workers and the interlocking intentionalities of the developers and the 'to-be-developed'" (Mosse, 2005, p. 10). To uncover a similar 'front-line' in the lifeworlds of the *kamayoq*, I could not simply follow the *kamayoq* as people or things that are entangled in development, nor as metaphors for broader processes such as the form of neoliberal multiculturalism that increasingly defines development in the Andes. Neither could I focus solely on the individual lives of *kamayoq*, nor the conflict that emerges between both the *kamayoq* and other *campesinos* and amongst the *kamayoq* themselves. Neither could I solely rely on following the knowledge of the *kamayoq* as mobile and mobilizing across localities and cultures (cf. Tsing, 2005). Rather, I attempted to follow the *kamayoq* – both spatially and temporally – as a *phenomenon* that is actively and intimately involved in shaping the interlocking intentionalities of various agents (both human and nonhuman) in the processes of continuous transformation in the Sierra Sur.

In following the *kamayoq*, therefore, I travelled the complex networks and relations according to which the phenomenon has historically been constructed and within which it operates today. This is not to say that I floated untouchably above everyday realities; rather, I was continuously 'touching down' in places and adjusting to 'on-the-ground' conditions. This process of touching down in particular places meant that I had to make decisions about research sites and my inter-twined presence in those sites. Before returning to the tensions

⁴³ The notion of "following stuff" as a methodological tool or approach is not necessarily new, but it has developed increased traction in recent years, particularly in conjunction with attempts to communicate networked relations to readers. See, for example, Ian Cook's (2004) (slightly eccentric) approach to following the papaya as an accessible way of exposing the complex relations that underpin commodity chains (also see: Cook, 2006).

involved in positioning myself within those sites, the following two sections clarify some of the logistical, practical and methodical components that underpinned the networked ethnography.

Sites and locations

Logistically, and as a matter of developing a networked ethnography, the sites themselves were important. By ‘sites’ I do not simply mean the geographical locations of the different spatially defined communities within which I conducted a variety of qualitative research methods (which I elaborate below). Rather, the sites reflect the coming together of various components of the network that I sought to travel and uncover as a relational product: various development programmes with distinct histories; *kamayoq* with varying social, demographic, and cultural attributes; differing local contexts in terms of local government involvement and the presence of external experts; and of course, the material conditions with which the *kamayoq* engage on an everyday basis. Nonetheless, these research sites do take shape in the material space of particular places, meaning that the relational story of a networked ethnography inevitably unfolds, at least in part, in these places. While I go into more analytical detail in chapter four, some place-based context is warranted at this point, both to clarify my process of ‘site’ selection and to add context to the development constellation within which the *kamayoq* operate.

On the whole, much of the narrative of the *kamayoq* that unfolds in this thesis is based on the lived realities of individual *kamayoq* in the departments of Cusco and Apurímac (see figure 1, introduction). Following an initial period of training and institutionalizing *unu kamayoq* (experts in techniques and technologies of irrigation) in Arequipa, the department of Cusco emerged as a re-born centre of *kamayoq* training and practice. As I explain in chapter three, this spatial concentration is consistent with the long institutional history of the *kamayoq*. Since the 1980s, however, Soluciones Prácticas has been instrumental in re-establishing the *kamayoq* as network of what the NGO describes as specialists, practical educators, experts, or leaders of facilitating livelihood improvements in the Sierra Sur. In 1996, the organization established *Escuela de Kamayoq*, which although was run from an office in the town of Sicuani, was in fact a training programme rather than a physical school space; hence it has recently evolved into the Centro de Innovación y Agro-negocios Rurales (CIAR; Centre for

Rural Innovation and Agribusiness). With *Escuela de Kamayoq* (and now CIAR) responsible for training the *kamayoq*, other Soluciones Prácticas projects – including Proyecto Allimpac introduced above – would draw upon *kamayoq* expertise, using them as intermediaries in project communication and implementation; hence the *campesino-a-campesino* model.

With Proyecto Allimpac reaching the end of its official stage of implementation during my first visit to the Sierra Sur, my research ultimately focussed on the long-standing effects of Escuela de Kamayoq/CIAR in the department of Cusco and the impact of the newly introduced Proyecto Paqocha in neighbouring Apurímac. The former was a strategically chosen ‘site’, for it brought together the long institutional history associated with the *kamayoq*, multiple generations of *kamayoq*, flows of multiple NGOs and programmes working with the *campesino-a-campesino* model, and the testing ground of the newly introduced government process of officially certifying *kamayoq* as *extensionistas rurales* (rural extensionists) and *promotores pecuarios* (livestock promoters). The development of this government programme led me to focus on these livestock *kamayoq*, despite the fact that over the years Escuela de Kamayoq has developed a number of different specialities, including in irrigation, Andean crops (grains and potatoes), horticulture, forestry, and renewable technologies.

This network ‘site’ also opened up the opportunity to explore multiple and diverse locations in which to conduct my ethnographic research. In addition to engaging with Soluciones Prácticas staff in their offices in Lima, Cusco, and Sicuani (as well as during their visits to the field), the emphasis of my work with the *kamayoq* themselves was centred on the municipalities of Kunturkanki (also known as El Descanso; 3,841 masl) and Checca (3,836 masl), in the province of Canas (see figure 2 in the introduction). The communities, hamlets, and households that surround these municipalities have long been the focus of Soluciones Prácticas interventions (as well as those of many other NGOs, as I explain in chapter four), making it relatively straightforward – in a logistical sense – to meet *kamayoq* with diverse backgrounds, ranging from the vastly experienced and multiply skilled, to recent graduates from *Escuela de Kamayoq*. Given the ways in which NGO interventions tend to congregate in particular places (see chapter four), I also extended my site to the nearby municipalities of Langui (3,960 masl) and Layo (3,998 masl), where *kamayoq* exist but lack the institutional support available in Kunturkanki and Checca. This extension helped me to follow the *kamayoq* as a phenomenon that is connected to broader institutional contexts, political forces, and social norms and practices. This mode of following occurred across time as well as space.

For example, the municipal centres of Checca, Langui, and Layo were products of the Spanish colonial processes of establishing *reducciones* – towns and communities into which dispersed households were ‘reduced’. Kunturkanki emerged in the 1950s as a truck stop, hence the Spanish name of El Descanso (The Rest) (Gade & Escobar, 1982); it was subsequently renamed to reflect its cultural-historic location in the ‘land of Túpac Amaru’ (the discursive effects of which I explore in chapter four). All four centres are important today as they act as regional hubs of communication, transport, exchange, institutional presence, and decision-making processes; yet their histories reflect the deeply embedded ways in which the *kamayoq* have participated in shaping these landscapes for centuries (see chapter three).

While the impact of *Escuela de Kamayoq* has been the subject of (sometimes rudimentary) analysis (Coupe, 2009; de la Torre Postigo, 2004; Solis Mora, 2008), *kamayoq* continue to be a focus of Soluciones Prácticas interventions that seek to spatially expand the *campesino-a-campesino* model. The second major site of ethnographic research therefore focussed on Proyecto Paqocha (Project Alpaca), which was introduced in 2011 to the departments of Apurímac and Ayacucho as part of the expansion of CIAR. The project presents the opportunity to track the evolution of the *kamayoq* in concept and practice. The aims of the project are: to improve the productive and organizational capacity of campesino families; to establish a network of *kamayoq* for local service provision; to strengthen capacity for rural development planning among regional governments and provincial and district municipalities; to establish a macro-regional organization of alpaca and llama breeders that is linked to regional *mesas técnicas* (participatory forums for development planning) and which has the capacity for dialogue with municipalities, state institutions, and the private sector.

This site offered a useful complement and potential counter to the research in Cusco, as it seeks to extend the successful case of *kamayoq* in Cusco to the under-served and more remote communities of Apurímac. Following this evolution of project design and implementation opens up the analytical terrain of identifying conceptual and practical shifts in the phenomenon of the *kamayoq*, not least in terms of Soluciones Prácticas’ evolving strategy. It is also telling that within the aims of Proyecto Paqocha significant emphasis is placed on building the capacity of local government and other supporting institutions; as I hinted above, the differing political-institutional contexts of Cusco and Apurímac have significant impacts on the role that the *kamayoq* play and the degree of success they can bring (in normatively-measured terms).

In terms of study locations, Proyecto Paqocha was implemented in three regions: Antabamba and Aymaraes in Apurímac, and Lucanas in Ayacucho (see figure 3 in the introduction). For the purposes of this study, I drew my logistical bounds along the Apurímac-Ayacucho border, meaning that *kamayoq* from Lucanas would not be directly included in the study, although I did attend Soluciones Prácticas workshops in the region's capital of Pampamarca (4,187 masl), simultaneously benefiting from the congregation of *kamayoq* as many travelled from Aymaraes in Apurímac. However, I focussed my efforts on the communities surrounding the two municipal centres of Antabamba (the capital of the province of Antabamba; 3,687 masl) and Cotaruse (in the province of Aymaraes; 3,240 masl). Of the total sixty-eight *kamayoq* (twenty-two women; forty-six men) trained as part of the project, twenty-seven of them (seven women; twenty men) were from the Antabamba region and twenty-two of them (seven women; fifteen men) were from Aymaraes. Like in Cusco, the majority of the *kamayoq* and their fellow *campesinos* are dotted across the countryside that surrounds the market towns of Antabamba and Cotaruse, which serve as network nodes for anyone attempting to obtain resources, whether political, economic, or material. Research activities therefore also took place in and around the settlements of Sabaino (3,421 masl), Calcauso (3,547 masl), Mollebamba (3,398 masl), Quilcaccasa (San Miguel de Mestízas; 4,182 masl) Pullini (4,355 masl), and Tortora (3,849 masl).

These two dynamic sites of investigation – the long running interventions around *kamayoq* in Cusco and the role of the *kamayoq* in the newly introduced Proyecto Paqocha in Apurímac – provide rich terrain for exploring differentiation within the phenomenon of the *kamayoq* due to their distinct institutional contexts. As I explain in chapter four, there are also material and structural elements that further colour the pattern of difference inherent to the *kamayoq* concept and practice. The dispersed nature of households, for example, means that they range between 3,500 and 5,600 masl, and span two production zones (high altitude alpaca herding and mixed production systems in the valleys and on lower slopes) that are characterized by steep, rocky slopes that descend rapidly to fast-flowing rivers, making travel between valleys and to market towns time consuming, strenuous, and potentially dangerous (**Figure 4**). This terrain, in combination with local and extra-local political-economic factors, has shaped the ways in which *campesinos* organise socio-economically and participate politically. As I explain in chapters four and six, some stark differences can be observed in this regard between Cusco and Apurímac.



Figure 4 The steep terrain of Apurímac, showing the distant town of Antabamba (slightly obscured on the right) and the community of Sabaino (left) (photo by author)

The veil of ‘methods’

To uncover these differences I drew on a variety of methods that were designed to suit the continuous tracking back and forth within the development network: from key informants in government in Lima, to *campesinos* half a day’s walk away from the nearest settlement; from NGO workers unpredictably fleeing between office-based report writing and far-flung field visits, to experimental alpaca research centres and laboratories; from archives in Lima, to corporate dairy producers in the northern department of Cajamarca. Much of my research fit within the approach often loosely described as participant observation; yet as I explain in the following section, I follow Mosse (2005) in arguing that my approach was more akin to ‘participant comprehension’ with the aim of ultimately participating in ‘participant deconstruction’. Nonetheless, the ‘participant’ component was achieved by involving myself in the following aspects of *kamayoc* life. The majority of the following components were conducted in Spanish; for interviews and events conducted in Quechua, I was accompanied by Justina Nuñez Nuñez, a bilingual education and development practitioner with whom I

developed a close working relationship (I reflect further on this relationship, and on the politics of language in which I was embedded, in the subsequent section ‘Navigating *Ilika*’).

- I attended six day-long capacity building and training sessions with Soluciones Prácticas (in Pampamarca (twice), Antabamba, Sabaino, Cotaruse, and Pumanuta);
- I participated in eleven *campesino-a-campesino* events of knowledge exchange (albeit not as a *campesino*), which tended to last approximately two hours.
- I conducted extended periods of observation at the homes of eleven *kamayoq*, thereby enabling observation of and participation in everyday livelihood practices, in addition to the *campesino-a-campesino* knowledge exchange event. This period ranged from a half day visit (entailing an introduction to all components of the household and livelihoods) to being welcomed as a guest in their homes for up to five days. The majority of stays lasted two days.
- I conducted in-depth interviews with twenty-seven different *kamayoq* (including multiple interviews with three *kamayoq*), seventeen of which were conducted in their homes, in the field, or in a fixed workplace, and the remainder were conducted on market days in the towns of Kunturkanki, Checca, and Layo. Conducting interviews on market days also facilitated observation of this routine component of Andean life; I returned on multiple occasions to market days in Kunturkanki, Langui, and Layo in order to familiarise myself with the ways in which *kamayoq* interact with their peers, as well as how market exchange sits alongside other routine social practices on these vibrant weekly events.
- I attended one day-long, large ceremonial/inauguration event conducted in April 2013 by the National Institute of Agrarian Innovation (INIA), with the support of the Ministry of Agriculture and Plan Meriss (see chapter four for details on these institutions). This event was organized around the ‘selection and registration’ of *kamayoq* in the Cusco region, and included the ceremonial awarding of over-sized certificates. As such, observation informed my insights into the performative nature of the *kamayoq* phenomenon, as well as how different institutions engage with the phenomenon.
- I regularly interacted with Soluciones Prácticas staff in their offices in Lima, Sicuani, and Abancay, as well as in the field. I attended two project-planning meetings for Proyecto Paqocha, which lasted over four hours each. I also presented some of the

results of my research to the Lima head-office, which evolved into a general meeting to strategize future developments in relation to the *kamayoq*.

- I observed processes at the alpaca research stations of Pacamarca, IVITA, and INIA. While the *kamayoq* do not have any formal link with the former, they have actively participated in training at IVITA and are being included in a national registry of livestock promoters by INIA. The objective of observing the work conducted at these locations was to understand the links between current developments in agrarian science and the work conducted by the *kamayoq* to improve agrarian livelihoods on an everyday basis.
- I attended two national conferences of relevance to my research, one on multi-cultural and bi-lingual education in Lima organized by IPEBA in November 2012, and the other on
- Finally, following an invitation by Peregrina Morgan – the president of the government institute SINEACE – on behalf national congressman Daniel Mora, I presented in Peruvian Congress as part of an event to promote the new national programme of certifying rural extension agents including the *kamayoq*. A *kamayoq* from Canas region of Cusco also presented at the Congress, and prior to the event we both attended planning meetings with high-level staff from SINEACE. The benefit here was being able to observe the interaction between *kamayoq* (albeit, a relatively ambitious and ‘upwardly mobile’ *kamayoq*) and members of government institutes with significant influence over the future direction of the national programme of certification. Seeing how the *kamayoq* are conceived in the elite circles of national government was an important component of being able to track back-and-forth within my networked methodology, maintaining a perspective on the role of *kamayoq* within the multi-scalar flows of the ethnodevelopment constellation (which itself bears the tensions between high-level policy discourses and the grounded realities of Andean *campesinos*).

This final involvement hints at the fact that my participant status was not fixed: at times I participated in the everyday activities of *campesino* life (**Figure 5**); at others, I circulated with Peruvian Congressmen and Congresswomen, as well as other key figures within various ministries and national institutes (**Figure 6**). The fact that staff in the rural hotels and



Figure 5 Treating an alpaca for parasites, near the community of Quilcaccasa, Apurímac (photo: Justina Nuñez)



Figure 6 Presenting in Peruvian congress (photo: Carolina Barrios)

hospedajes would – usually as a sign of respect – greet me as *ingeniero* (engineer), speaks to the fact that I was not always in control of either how I was perceived at first site (in this case, apparently taking on the appearance of NGO technical staff or of a consultant to a mining company), or how I perceived those around me in this always uncertain relationship. This uneasy tension could be cast in terms of the ethnic and class distinctions that override what Ananya Roy called “liminal positioning”: the ambiguity and contradiction inherent to the slippages of ‘insider’ and ‘outsider’ positionality, which inevitably accompany the researcher as s/he navigates terrain that can simultaneously be homely and unfamiliar. Later, I expand on the tensions involved in walking this line of affiliation, but here I introduce some of the issues encountered in implementing a ‘tool-box’ set of qualitative research methods, which at times served to shroud the more problematic issue of my shifting political and methodological position.

In support of participant observation, I relied on a selection of qualitative research methods that reflect my training as both an academic geographer and a development practitioner. I conducted interviews with forty-seven key informants at various scales of government, in NGOs, and in academia, as well as in-depth interviews with twenty-seven *kamayoq* (see appendix 1 for a list of key informant interviewees, and appendix 2 for a list of anonymous *kamayoq* participants, including reference to their areas of expertise and status as a *kamayoq*). I also conducted six focus groups with a total of sixty-two *kamayoq* in the communities of Pucacancha (thirteen participants), Checca (nineteen participants), Sabaino (eight participants), Pampamarca (eleven participants), Layo (six participants), and Sicuani (five participants). In total, 79 different *kamayoq* participated in the research (some *kamayoq* provided interviews and participated in a focus group).⁴⁴ In addition, I was drawn by empirical necessity to conduct archival research at the Archivo General de la Nación in Lima, in order to piece together the apparent disappearance of the *kamayoq* in the wake of the fall of the Inka Empire. For this, I am gratefully indebted to the help of Vania Pimental Hurtado – a student at the Universidad Nacional Mayor de San Marcos in Lima – who accompanied me to the Archivo as we thumbed through dozens of burnt manuscripts, painstakingly attempting to

⁴⁴ With permission, I recorded all interviews, focus groups, meetings, and capacity-building sessions. The recordings were transcribed *verbatim* with the help of Justina Nuñez Nuñez and Pilar Rueda Gallego. These transcriptions were analysed, along with relevant grey literature and other secondary data, using the qualitative research software NVivo 10, developed and published by QSR International.

decipher the old Spanish script on documents written half a millennium ago.⁴⁵ Other literary data sources included secondary information produced by various government institutes and agencies, as well as non-governmental organizations, including: the ministries of agriculture, labour and employment, development and social inclusion, and the economy; the national statistics office INEI (Instituto Nacional de Estadística e Informática); Peruvian National Congress and its depository of national laws and decrees; INIA; IPEBA; Soluciones Prácticas; and various other NGOs and multi-lateral institutions and funding agencies (such as IFAD, the World Bank, etc.).

An equally complex task was navigating the terrain of interviews and focus groups. The former presented the challenge of being able to interview a range of differentially engaged actors, from experts and policy-makers, through academics and NGO staff in Lima, Cusco, and small-town offices, to *campesinos* and *kamayoq* on mountain-sides while carrying out the everyday tasks of rural life. Notwithstanding a small selection of interviews that I conducted during a preliminary visit in 2011, upon my return in 2012, I strategically began my interviews with academics and NGO staff in Lima, which opened doors to information and networks. As my empirical knowledge-based and my network expanded, I began interviewing a broader and more diverse selection of informants, including ministers, representatives from various scales of government, and important figures within government and private sector institutes. Herein lay the problem of “agent inflation” identified by Peck & Theodore (2012, p. 26) whereby “conversations with demonstrably powerful policy actors may often yield exaggerated accounts of foresight, rationality, or creative entrepreneurship”. Elizabeth Dunn (2007) previously used the related analogy of the pufferfish: “many of the people we interview...are pufferfish. Seeing researchers as potential threats, they may inflate themselves to seem more intimidating...they practise their stories until they are hard, polished nuggets of rehearsed text, leaving the researcher little to do but write down the pre-digested narrative as it is told”. This combined problem – of interviewees simultaneously inflating their own importance and role, and of sticking rigidly to an established, often institutional, story or position – did surface occasionally. In chapters four and five, for example, I discuss the emphasis placed by

⁴⁵ In May 1943, the National Library of Peru – where historic records were previously held – suffered the effects of a large fire, which destroyed the old building along with many important historical records. Those that survived were moved to the national archive, where they remain in a charred state that makes for difficult reading.

representatives of the government institutes SINEACE and IPEBA on the employment benefits of establishing a national system of *kamayoyq* certification. Only after multiple interviews and having established a slightly more-than-researcher rapport, was I able to tease out some of their own critical perspectives. Yet this rapport, in itself, also posed an interesting dilemma, as it emerged in a space that was outside of the formal interview and yet continued to inform my understanding and analytical capabilities of the topic at hand. I do not use direct quotes taken from participation in this space; however, it would be difficult to detach entirely the insights gained from the process, and the participants involved were always cognisant of my role as a researcher.

Agent inflation and the pufferfish syndrome only seem to tell part of the story of conducting interviews in the networks of development in practice, which are perhaps slightly different to the networks of policy makers within which economic geographers such as Elizabeth Dunn, Jamie Peck, and Nik Theodore circulate. To *agent* inflation, we might add *project* inflation and *critical* inflation. The former reflects the fact that development often carries explicit normative overtones, meaning that development projects must come packaged with particular developmental outcomes. Interviewees involved in the practical side of development – whether as part of NGOs, government, or academia – often focus on the successes of such interventions (though not necessarily their own role), at times inflating their potential and actual impact. The notion of *critical* inflation reflects the opposite scenario, and is most commonly present in interviews with academics or social activists. In this scenario, interviewees offer their (at times unsolicited) critical insights and wisdom, without necessarily clarifying the details of the case or addressing the broader picture. The difficulty here is discerning hyperbole and ideology from grounded critique and reflection; triangulation between multiple, diverse sources remains indispensable to discerning the distinction between common reality and personal perspective.

Finally, in contrast to these forms of inflation, conducting research in the Andes also inevitably raises issues of unequal power relations, many of which are steeped in colonial histories. These power relations can result in a silencing of some actors, particularly historically marginalized and excluded populations such as women and indigenous groups. I reflect on this silencing in more detail in the following section, but here I refer to a particular articulation of this marginalization in the form of *agent deflation*. In contrast to the policy-makers who believe in their own inflated importance, marginalized actors often carry their

perceived social status into interview scenarios. There are at least three factors that affect this scenario. First, due to long histories of racial and gendered exclusion, some interviewees appeared to have been socio-culturally conditioned to downplay the significance of their thoughts and opinions (or even to keep those thoughts to themselves). Second, the relations between ‘external’ development practitioners and ‘internal’ development ‘beneficiaries’ reinforce these historic power relations, placing interviewees into an awkward and insecure position with any interviewee deemed to be potentially aligned with NGO projects or government interventions. Third, my role as an interviewer potentially further exacerbated these unequal relations. Being perceived as an outsider is inevitable, but a critical awareness of my own position and affiliation can help to avoid alienation from the *kamayoq* and other *campesinos* by sitting too closely with government and NGO staff. On the other hand, had I aligned myself too closely with *campesino* concerns and demands (particularly where there were issues of conflict), I would have risked severing ties in the development constellation that I sought to travel as part of my methodological process.

Radical readers might suggest that I should have abandoned my hierarchical ties with government, and unequivocally aligned myself with the interests of the Sierra Sur’s rural population; yet these interests are not singular, fixed, nor necessarily coherent, and regardless of other networks of affiliation, it remains difficult to navigate the cultural elements that reinforce agent *deflation*. Inhabitants of the Sierra Sur are often perceived as socially reserved, and as respectful of hierarchy (real or imagined/constructed). In my experience, the majority are also extremely humble, will speak within their means and social position, and will rarely challenge an ‘expert’ from an NGO or government. These are partly customary traits of Andean culture: group discussions, for example, always begin with careful and methodical introductions that establish and acknowledge various social positions; without them, open conversation cannot begin. While it is not my task here to uncover the cultural history of such components, there was a clear distinction between the vocal men and the persistently silent women (which I explore further in the following section), and some interviewees acknowledged that their reluctance to speak freely was related to a ‘shadow of terror’ (García, 2005a) that has remained cast over the Andes since the violent insurgencies of the 1980s – the implications of which I explore further in chapter four.

Ultimately, these different forms of inflation and deflation reinforced each other, and at times my self-positioning was exposed by participating *kamayoq*. During a focus group in

Checca, for example, I was challenged by Edgar – a particularly confident and vocal *kamayoq*, who had worked for the local municipality and an NGO (suggesting that his confidence might be linked to western forms of professionalization, though not necessarily in a linear, causal fashion). As we began to conclude the focus group, after about three hours of group discussion and activities, I encouraged everyone in the room to volunteer any other reflections they had, either on the topic at hand or more broadly on life as a *kamayoq*. Edgar was quick to respond:

Edgar: Well here is one thing, I have a doubt...it is the first time this year we are meeting...and particularly with *compañero* Julian...Yet how will it be? Now that you [the NGO Soluciones Prácticas] are back, will we go back to training, or are you only coming to get information and then take that information and make a diagnosis? And then you will leave and not come back? It would be nice to clarify.

Julian: I'm not going to leave with this information and do nothing more. I'm going to talk with ITDG [Soluciones Prácticas] and with the municipalities, and also with other organizations that I can. Its not just about how to record information right here, but together with the training process, we also need to do research to know which kinds of knowledge are important to you, and which should be in the guidelines made by ITDG and IPEBA. That's partly why I'm here.

Edgar: I have just had a bad experience with this institution from Lima, they also do research, well, take information. At the time I had already advanced my herd and I had improved stoves, but they took information from me. I was offered scholarships to Spain, I got their e-mail, I got their phone number, I called and called and they never answered. So why is there this distrust? In the countryside we have rich knowledge... I could write a book of information on medicinal plants, rocks, soils... we farmers are also scientific researchers in the field: every day we are looking at this space...it is our world, of us the *campesinos*, and most of all the *kamayoq*. And then institutions take advantage of our knowledge, and the next day I found, in Kunturkanki, I saw images of these improved stoves that they said had been [a result of] their experience. So I got up to complain, and then they shushed me, they told me that we should talk after.

I could position this awkward interaction within the spatial division of labour associated with the production of knowledge as a commodity (which usually profits researchers in the ‘global North’ or the ‘West’). As Vinay Gidwani argued, this production is marked by a connective geography, “a politics of translation that is at once a politics of transportation” (Gidwani, 2008, p. 236), as researchers from globalized centres of production become mediators in transporting the realities of those on the periphery: to count as ‘knowledge’, information must be moved from the periphery to these globalized centres and be given a recognizable, disciplinary form. Nonetheless, Gidwani argued, research conducted in the periphery by those from globalized centres must proceed, and yet to do so it must navigate various barriers. The space where these barriers are met reflects one in which “theories and

methodologies are confronted by demands that cannot be anticipated or resolved *a priori*” (ibid.). The conversation with Edgar was, therefore, reflective of the broader dynamic in which we were both operating, as the theories and paradigms of the ethnodevelopment constellation meet the demands and worldviews of the very people that the constellation is designed to ‘help’. Edgar’s concerns were borne of previous experience, pointing to the quotidian nature of the uneven effects of ethnodevelopment at work. In contrast to Gidwani, therefore, I do not see these moments as simply ruptures in academic circuits of ‘value’; rather they are formative moments in the relational process of acting in – of having an impact in – the very networks that I sought to unravel.

As I read the transcript of this focus group roughly nine months later at my desk in Vancouver, two other elements were most apparent in the micro-politics of the situation. First, Edgar clearly associated me with the programmes of Soluciones Prácticas (still referred to as ITDG in some locations where it has had a long-standing presence). Despite making explicit effort in every focus group and every interview to stress my position as an independent researcher, it was difficult to escape the fact that I only knew these *kamayoq* because I had utilized my connections with the NGO, and because I travelled with Justina Nuñez – a former employee and consultant to Soluciones Prácticas. Justina and I walked a tightrope of invoking the NGO’s name in order to clarify how and why we were approaching these *kamayoq*, while simultaneously distancing ourselves from any formal projects or interventions. Clearly, in the case of the focus group in Checca, we failed to maintain this balance adequately, as *kamayoq* began to expect new programmes and new rounds of capacity building simply due to our very presence. These expectations point to the new cultural-political landscapes that emerge around concentrations of development interventions – a theme that I address in detail in chapter four.

The second element that struck me was my response: I was quick to backtrack both as a researcher and as a practitioner, attempting instead to a middle ground as an intermediary or advocate. I did not defend NGO ventures, as if they are beyond critique in the sense explored by Amanda Lashaw (2013); neither did I justify the process of extracting knowledge described by Edgar. I did, however, clearly position my potential impact at the level of programming and policy-making; this is perhaps true, but it also reflects the fact that the boundary between my research practices and NGO interventions was more blurred than I had realized, just as Lashaw cautioned it would be and suggesting that these boundaries need to be carefully mapped (cf. Labaree, 2002). Seemingly banal elements can also exacerbate the blurring of

these boundaries, such as arriving at focus groups in a pick-up truck, prepared with drinks, snacks, and the typical materials used in NGO capacity building scenarios (rolls of flip chart paper, stacks of pens, name badges, registration and consent forms, etc.). Indeed, the procedures I adopted in the focus groups themselves could have been taken from a practical guide to NGO fieldwork, should one exist.⁴⁶

Although five of the six focus groups were organized in the same way, each inevitably took its own course according to a degree of steering by the participants.⁴⁷ Initial and customary introductions were followed by a series of questions on the meaning of being a *kamayoq*, during which time participants were encouraged to speak freely. The discussions were then usually directed towards the topic of what kinds of work the *kamayoq* do in the community, why they are important, and what gaps exist in terms of supporting *kamayoq* as valuable community members and agents of change. This final question led to the issue of institutional contexts, at which point a process of participatory elicitation was introduced. The groups were asked to identify every organization or institution that is important for supporting developmental activities in the community, particularly in relation to enhancing the operational environment of *kamayoq*. Using the list as a guide, the focus group participants created a map of the institutional context, whereby the community was placed at the centre and the organizations/institutions positioned according to three criteria: accessibility was illustrated graphically according to distance from the centre; relevance/prevalence was illustrated according to the graphic size of the organization; and communication was depicted according to the density or width of the connecting line.⁴⁸ While this process was conducted largely to promote animated discussion around the topic of institutional support, the process and the diagrams themselves also serve as useful data, with which I specifically engage in chapter four.

This participatory approach to conducting a focus group – particularly of drawing on relatively well-established and well-rehearsed techniques for both engaging participants and uncovering data in multiple ways – has become a staple of NGO work ever since Robert

⁴⁶ Although I am unaware of any comprehensive field-guide, *per se*, for some examples of practitioner-oriented methodological compilations, see Kumar (2002), Sillitoe (2005), and/or Eade (2003).

⁴⁷ The focus group in Sicuani was an exception, as the participating *kamayoq* were experienced and leaders of various institutes and associations. This focus group therefore addressed issues of association amongst different groups of *kamayoq*.

⁴⁸ For more information on this kind of method, see chapter four of Kumar (2002).

Chambers helped to instigate a methodological paradigm shift (Chambers, 1983, 1997; for his more recent reflections on development methodologies, see: Chambers, 2006, 2007a, 2007b). Amongst international development NGOs in particular, it would be difficult to find any that do not rely on an increasing number and array of participatory techniques and methodologies.⁴⁹ It was perhaps not surprising, then, that the participants in Checca may have conflated my approach with that of Soluciones Prácticas. In fact, my approach may have been influenced by the NGO to a greater extent than I had previously realized. While I did not stumble upon the specific methods that I used, neither did I arrive by chance at the dynamic sites of networked interaction that I outlined above. My point is not that my research methodology was perfectly planned and executed (rather, it was also recursive and subject to adaptive transformation). There is nonetheless a contextual history that led me to these sites and enabled me to carry out the research, thereby affecting my positioning and affiliation, and influencing the very way in which I conducted my research. Although I had not conducted in-depth, primary research into the *kamayoq* before arriving in Peru in 2011, the results that emerge are a product of a longer and more embedded trajectory within the workings of development.

In July 2004, I assumed a position at the UK head office of what was then known as the Intermediate Technology Development Group – the NGO that Fritz Schumacher had founded in 1966, and which would later roll out the farmer-to-farmer extension model under the new name of Practical Action (and Soluciones Prácticas in Latin America). After leaving Practical Action in 2005, I later returned for a brief period in 2006-2007, and finally conducted research for the Nepal office in 2010. This dissertation is, therefore, a product of a decade of working with and through development. The world of the development practitioner has become familiar to me, and along the way I have picked up the various tools and techniques (such as those mentioned above) that are required for both the development practitioner and the researcher to navigate what at times appears to be an unfamiliar world. In some cases, this history can facilitate and ease research processes; in others, it can create a friction that stems from the uneven relations within which I operate (as the case with Edgar revealed). As I circulate through the complex network of relations that shape the *kamayoq* concept and

⁴⁹ For a critique of the broader tendency among NGOs to instrumentalize participatory techniques within their approaches to technical assistance, see Walker et al. (2008).

practice, inevitably I have an effect as a perceived external ‘expert’ conditioned by a set of world views that are historically complicit in all of the processes that for centuries have been squashing ethnic diversity, even as ethnic *difference* has been emphasized in order to facilitate and entrench the rule of European culture and society. My position in the ethnodevelopment constellation was therefore significant, and in the following section – in an attempt to avoid the “silence of location” exposed by Juanita Sundberg (2014) – I expand on the tensions that arose.

Navigating *llika*: polymorphous engagements and multi-positionality

Given the networked approach that I have presented so far, it is worth reflecting on development ethnographies in terms of “polymorphous engagements” (Hannerz, 2003, p. 212): multiple and overlapping engagements or inter-relations – some fleeting, some lasting – between and among a diversity of actors. This “ethnography as affect”, as Gidwani (2008) put it, creates a particular form of knowledge that is derived from being entangled in relational networks within our more-than-human world. The knowledge that derives is always in production; it is immanent, to borrow the language of those who draw on Gilles Deleuze. While it is not purely relative, it is always uncertain according to the varying connections and interactions of the researcher, and cannot simply be captured at one particular moment – cannot be fixed in place or time in order to create a comprehensive picture of development’s complex inner workings and subjectivities. To this end, it is worth recalling David Mosse’s argument that development ethnographies must increasingly be multi-positioned as well as multi-sited (Mosse, 2005). For Juanita Sundberg (2014), part of the challenge lies in the fact that researchers often carry Eurocentric imaginaries into their work, imposing assumptions (conscious or otherwise) about the supremacy and universality of European political philosophies. The result is what she calls a silencing of indigenous epistemologies, of indigenous ways of seeing and knowing the world.

One strategy for multi-positioning myself in a way that evades the silencing of *kamayoq* epistemologies might be to locate myself relationally and on-the-ground with the *kamayoq*. Yet Janis Nuckolls (2010) has illustrated the difficulty of understanding the Quechua world without possessing a deep, contextual, and experiential knowledge of the Quechua language. Quechua is so complex and subsumed within Andean worldviews and experiences in the

more-than-human world, she argued, that to attempt a complete understanding of this world through Latin or Germanic languages is almost futile. Ideophony – the use of words to invoke sensory perceptions – is the central element of this aporia. According to Nuckolls, the dialogical ethos of Quechua reveals the *source* of one’s views, opinions, and conceptions – something that Spanish and English cannot capture without explicit reference. In contrast to these languages, Quechua embodies an “animistic” view of the world: “nonhumans are often presented in narratives as having articulate thoughts and as sharing many of the same moral values, talents, and foibles that people recognize among themselves” (Nuckolls, 2010, p. 4).

The symbolic ecology among Quechua people is therefore given a voice through ideophones. The *llika* itself embodies this ecology, as it depicts a networked interaction – a web of relations – among the human and nonhuman components the world. As a concept and practice, *llika* is one of the ways in which indigenous populations of the Andes engage in relations of exchange with nonhuman elements. At times, Quechua people even use ideophony to “conjure nonhumans as actors in the political arena” (de La Cadena, 2010, p. 354) of both everyday life and broader, more formalized political process. Yet paradoxically, there is an inevitable “impoverished form that indigenous public discourse may have to take when it is adapted for literate circulation” (Nuckolls, 2010, p. 9), meaning that no matter how intricate the translation, interpretation, analysis, or representation, it can never fully capture and communicate the complexity of the everyday lifeworlds of Quechua people.

It seemed impossible, then, to fully grasp the kinds of indigenous *epistemē* to which I was about to be partially exposed, and with which Juanita Sundberg (2014) has encouraged us to engage. For most of my excursions beyond Andean towns, Justina Nuñez Nuñez – a dedicated and knowledgeable field companion – accompanied to the remote villages and homes of the *kamayoq*. Justina is bi-lingual; born in a rural area of the department of Cusco she was raised in Quechua, but schooled in *castellano*. Yet despite her skills and knowledge of navigating Andean life and culture, the limits to translation uncovered by Nuckolls remained. Though Justina could translate into *castellano* every word of Quechua spoken by the *kamayoq* and *campesinos*, the original (potentially deeper) meaning could either be lost or maintained at various points that I had no possibility of detecting. This barrier make it difficult to uncover how epistemology is embedded in certain languages and related cultural genealogies, as Walter Mignolo (1999) has pointed out. It also meant that I relied on particular translations of Quechua culture and language – translations that remain open to Nuckolls’ critique and which

are shaped by the uneven power dynamics associated with conducting research as an ‘outsider’ in the Sierra Sur.

Once Justina and I had built a strong rapport and functioned as a coherent research team, there were times that I was able to concentrate on observing Justina develop the interviews and conversations in Quechua – by this time, she knew the research intimately and my guidance was not required, particularly for relatively routine events. This relationship raises the issues of fraternal patriarchy within post-colonial contexts, which I discussed in the introduction. While I justified my relationship with Justina in terms of mutual benefit, it was universally women who chose to engage with Justina in Quechua, reflecting the fact that language is an important driver in the internalization of patriarchal colonial structures, which have resulted in differential access among women to rights and resources such as representation, political influence, and to being “heard” in indigenous societies (Kuokkanen, 2012).

This dynamic therefore also highlights the intersection of the cultural-linguistic barrier with the gendered dynamic of Andean life. Historically, rural women in Peru have been excluded from formal education – including prior to Hispanic colonization – meaning that many prefer to converse in Quechua.⁵⁰ By contrast, many men seemed less attached to their Quechua heritage, preferring instead to restrict themselves to the *castellano* historically imposed by colonial and neo-colonial educational structures. This raises a cultural dimension to the gender dynamic; females who can converse in *castellano* continue to assert their Quechua roots by preferring indigenous dialogue. This preference is an important part of cultural re-affirmation, but it is also one with which I could not engage fully. The result is that the deepest understandings and expressions of Andean cultural life, and its position within an entanglement of human-nonhuman relations, were perhaps the furthest from my reach. By contrast, the desire for men to assert their role in their communities, and the fact that they preferred to converse in *castellano*, meant that I was frequently a target for open and frank discussions, as well as attempts to gain my favour in the hopes that I could bring them resources and enter them into networks. (Ironically, I was often the unconnected one in this relationship.) This was an difficult dynamic to navigate: my silence during Justina’s

⁵⁰ For more details on the historic inequalities of education in Peru, see García (2005a) and Thorp and Paredes (2010).

conversations in Quechua may have been an accidental blessing that inadvertently reduced my imposing status as an outside ‘expert’; at the same time, however, I feared a lack of engagement with Quechua women and the associated perception that I was aligning with the male population. Such alignment could unwittingly entrench post-colonial relations of fraternal patriarchy, as women continue to be ‘listened to’ in Quechua, while men are ‘heard’ in Spanish – an unequal relation that persists more broadly in the ways in which women *kamayoq* participate in the politics spheres of community life.

Ultimately, it is hard to comprehend the true effect of this cultural-methodological dissonance. Conversations with Justina suggest that I was perhaps self-inflating my impact on these scenarios, as Quechua women (particularly of the older generations) are shy and reserved due to centuries of inequality that is yet truly to be reckoned with in rural areas. While my presence may have represented some deeper lying and more profound planes of inequality, to suggest that Quechua women would retreat any less if introduced to any other external ‘expert’ (whether fluent in Quechua or not) might imply that I suffer from a kind of ‘researcher-agent auto-inflation’ (with apologies to Peck and Theodore (2012) for further stretching their notion of ‘agent inflation’). At times, as I observed Justina’s interactions with the women *kamayoq*, it seemed as if they had forgotten about my presence altogether: they would lead Justina – and by extension, me – around their homes, fields, and livestock, proudly displaying why they are able to call themselves *kamayoq*. As I grew more comfortable within the dynamic of Quechua dialogue, I would increasingly take opportune moments to clarify the current topic of conversation or to ask questions based on my observations. Transcripts later revealed that a dynamic of inadvertent fact checking and verification emerged as Justina and I pulled the conversations in various overlapping directions (albeit at times painstakingly, as I interrupted the existing conversational flow).

While dwelling too negatively and apologetically on such interactions might do little service to the *kamayoq* or my own research, these socio-cultural dynamics did require a degree of pro-active positioning on my part. One potential pro-active route would be to adopt Juanita Sundberg’s (2014) notion of ‘walking with’ indigenous peoples and cultures in order to take necessary steps of decolonization. This is evocative of Boaventura de Sousa Santos’ notion of ‘cognitive justice’, which seeks to reverse the cultural and epistemic oppression, exclusion, and discrimination associated with Western supremacy and global capitalism. Sundberg, however, drew on the philosophy of the Zapatistas (Ejército Zapatista de Liberación Nacional,

EZLN) to suggest that by moving, engaging, and reflecting with indigenous actors, we may begin a process of enacting decolonization, which is defined in part by the cultivation of ‘multi-epistemic literacy’ – the ability to see and understand the world through, or in dialogue with, multiple different worldviews.⁵¹ This approach goes beyond attempts simply to integrate indigenous knowledge into Western knowledge paradigms, as it emphasises the continuous enactment and stabilization of different and asymmetrically connected ways of knowing (Blaser, 2009d).

In the Andean context, this approach is comparable to the perspective of PRATEC, a radical NGO focussed on decolonial solutions to Andean life and production, and which has pointed to the need for a “diálogo de saberes” – a dialogue of knowledges that regards knowledge as immanently differentiated, not as simply as variation on a theme (such as Western knowledge derived from Greek philosophy). In this context, ‘scientific wisdom’ sits equally alongside and intersects with other forms of wisdom, including those derived from historically excluded and marginalized sources, such as Andean cultures, the more-than-human living world, women, etc. (PRATEC, 2012). More broadly, Mignolo & Schiwy (2003) have advocated for a process of ‘transculturation’ between Andean and non-Andean societies and culture, which takes on a similar “double translation” to the dialogue of knowledges proposed by PRATEC. While translation has indeed acted as a process in enacting colonial difference, complex mechanisms of linguistic and knowledge reciprocity – which the authors call “translanguaging” – can convey knowledge, emotions, and memories between difference cultures, thereby acting as both an interlinguistic and intercosmological device (Mignolo & Schiwy, 2003).

Given the difficulty of achieving these dialogues and literacies through linguistic devices in the Andes, any advances towards multi-epistemic literacy had to derive from practice. Sundberg stressed the importance of a practical component to multi-epistemic literacy, pointing to *preguntando caminamos* (‘asking we walk’) as a “dialogic politics of walking

⁵¹ Sundberg’s use of ‘multi-epistemic’ literacy builds on Rauna Kuokkanen’s (2007, p. 155) proposition, which she based on Gayatri Spivak’s notion of ‘transnational literacy’. Both concepts reflect a mind-changing process that opens the imagination and stimulates abilities to read, write, listen, hear, and learn in ways that cultivate non-competitive approaches to epistemology. They also potentially move beyond notions such as ‘border knowledges’ (Mignolo, 2000) and ‘border dialogue’ (Blaser, 2010), which stress – but do not necessarily resolve – the tensions between Western-modernist and Indigenous ontologies and epistemologies.

and talking, doing and reflecting”, which means “locating our body-knowledge in relation to the existing paths we know and walk” (Sundberg, 2014, p. 40). This also means exposing our body-knowledge to the paths of others in order to open ourselves to the kind of pluriverse that Sundberg envisions can be achieved through ‘unlearning’. There are, of course, parallels between *preguntando caminando* and the philosophy of *aprender haciendo*, which underpins the *kamayoyq* in concept and practice. My approach nonetheless stopped short of Sundberg’s expectations, as I sporadically learnt-while-doing alongside a selection of *kamayoyq*. However, there are other ways in which we can “take responsibility for the epistemological and ontological worlds we enact” (Sundberg, 2014, p. 40), including by recognizing our own limited ability as research-actors to comprehend different ontologies from within existing epistemological frameworks, and by locating these limits within politics of conducting research.

Here, I draw on David Mosse’s (2005) emphasis on ‘participant comprehension’ and ‘participant deconstruction’. The former points to the performative role played by the researcher-actor; in my case this came about on multiple levels, from engaging in strategic decision-making along with staff from NGOs and government agencies about the professionalization of the *kamayoyq* (see chapter five), to participating in everyday tasks of *campesino* life, such as catching and treating alpacas for various diseases and parasites. Going through the motions of everyday life as a *kamayoyq* meant that I could participate meaningfully and productively in making those strategic decisions with NGOs and government agencies. But it means more than simply repeating a *kamayoyq*’s task. While I was staying with César – a *kamayoyq* from the community of Alto Sausaya in the district of Checca – we whiled away the long dark hours of an Andean evening by planning his future as a *campesino* and a *kamayoyq*. On the same kind of flipchart paper commonly found in a participatory capacity-building scenario, César sketched out his current situation and then his plan to reach his desired future scenario by 2016. He meticulously went through all of the strategies, technologies, and livelihood changes that he would implement, clearly combining his experiential knowledge with the content he was learning as a *kamayoyq*-in-training. He then showed me a large map of his home and agricultural land, which he had previously drawn to encapsulate his utopian vision.

These kinds of moments entail a degree of mutual reflection – something akin to Mosse’s notion of ‘participant deconstruction’. It is difficult, however, to envisage a linear scale from

participant observation, through comprehension, to deconstruction. Many conversations and sustained relations shaped my evolving understanding throughout my research: from the long conversations with Justina as we passed the time during the many travel detours caused by washed out roads or highways blocked by landslides and boulders, to the lively discussions with Julia Hinojosa as we sat in Cusco's Plaza de Armas. Many of the politically savvy and engaged *kamayoq* also shed new light on seemingly familiar topics, as we discussed the finer details of local politics and patronage while preparing dinner, or as they explained to me the complex and varied relationships between each development institution and their community while we followed their well trodden paths from home to livestock. Any distinction between comprehension and deconstruction is difficult to detect – if one exists at all. In fact, many of the questions that I asked César as he narrated his future scenario stemmed from “prevailing models and means-ends rationality” that are associated with the normative project of Western-defined development from which we must escape – Mosse argued – if we are to offer critical insight (Mosse, 2005, p. 13).

For Mosse, this element presented the danger of being marginalized by the normatively focussed project communities he sought to understand. At times, I encountered a similar barrier: the night before presenting in front of Peruvian National Congress, for example, Peregrina Morgan – director of the government body, SINEACE, responsible for overseeing the new national system of *kamayoq* professionalization – invited me to her home so that we could prepare. After the customary offering of *mate* (a kind of tea), Peregrina sat me down and revealed the notes that she had made on my prepared presentation. She implored me not to criticize SINEACE's position that *kamayoq* certification and professionalization leads to substantial opportunities in terms of paid employment: “who are you to tell them [the *kamayoq*] that they can't work in the mines?”, she pressed. Peregrina had simplified my critique somewhat, transforming it into a false choice concerning the freedom to participate in the opportunities brought about by the arrival of mining to rural communities in the Sierra Sur. Nonetheless, I was in danger of alienating the ‘project community’ by presenting the kind of critical reflection that came from accompanying César through his process of future planning. Throughout my research process, then, my polymorphous engagements were a balancing act: travelling a network within which hierarchies could not be flattened meant appeasing decision-makers in government and NGOs, while not attempting not to alienate the *kamayoq* whose worlds with which I was ultimately trying to engage.

Final reflections

Anna Tsing is perhaps best known for her attempt to develop a multi-sited ethnography of “zones of awkward engagement” in Indonesian forests, accounting for how the global folds into the local (Tsing, 2005). Elsewhere, however, she has used the metaphor of a creek in a landscape to invoke a complex, system-like imaginary for understanding the demands of networked methodologies (Tsing, 2000). While this metaphor is useful for highlighting the complex and dynamic nature of inter-connected systems and environmental components (where the environment is the entire landscape of investigation), as she later pointed out, it is necessary to interrupt the image of a fully-flowing, unified, and successful regime of global self-management (that is, neoliberal governance) (Tsing, 2005). Tsing therefore placed emphasis on the ethnographic fragments that facilitate such an interruption as they highlight the friction rather than unity of global connections. These fragments, she argued, offer a more realistic narrative by emphasizing disjunctions. Yet to understand precisely what these disjunctions mean, there is a need to place the fragments into meaningful connection with broader – but no means universal – shifts and structural changes (that is, to reveal their structural coupling (Escobar, 2008)).

I have therefore adopted a different metaphor of the constellation. As I clarify in chapters three and seven, this metaphor is historically underpinned by Andean cultural systems; the metaphor itself therefore internalises the tensions of ethnodevelopment paradigms. I have also used it here to point to the ways in which globalized ethnodevelopment networks begin to take shape in local contexts. In this chapter, I outlined the ethnographic approach that I developed in order to make connections between the seemingly localized practices of the *kamayoq* and the multi-scalar, structural conditions of the ethnodevelopment constellation within which they now operate. I pointed to a networked ethnography that builds on a multi-sited and multi-locational approach, whereby ‘sites’ are dynamic intersections of the ethnodevelopment constellation (the projects, programmes, and interventions of development agencies), and locations are the places where these intersections are unfolded by local actors, such as the *kamayoq*. While this methodology, and the specific methods that I implemented within it, also presented challenges of multi-positionality, I have argued that understanding the practices of the ethnodevelopment constellation as a series of polymorphous engagements helps to locate the *kamayoq* in relation to other *campesinos*, development practitioners, Andean forms of community organization,

government decision-makers, nonhuman and sentient beings, and academic researchers, among other actors of the constellation. In this chapter, I have set the stage for the remainder of the dissertation, which teases out the effects of the various polymorphous engagements associated with the ways in which the ethnodevelopment constellation intersects with the *kamayoq* phenomenon, in both concept and practice. In the following chapter, I develop a temporal component by highlighting how the ethnodevelopment paradigm absorbs the phenomenon of the *kamayoq* by virtue of its pre-Hispanic origins. I therefore address the question of whether this reflects the instrumental use of culture as a resource or as an institution, or whether the revival of the *kamayoq* phenomenon tells the contrasting story of how flexible, dynamic, and multiple concepts of culture can help to reconceive the development constellation as a set of culturally embedded practices and meanings.

THREE

HISTORICIZING ETHNODEVELOPMENT:

KAMAYOQ AND POLITICAL-ECONOMIC INTEGRATION ACROSS GOVERNANCE

REGIMES IN THE ANDES

In this chapter, I develop a historical analysis of the institutionalization of the *kamayoq* within different modes of production and regimes of governance.⁵² Such an analysis fills an empirical and conceptual gap in relation to the *kamayoq*. Empirically, no comprehensive account exists of how various kinds of *kamayoq* have functioned across forms of political-economic organization and governance. I provide such an account, illustrating the different roles that *kamayoq* have played in order to uphold various regimes of production and socio-cultural reproduction. To resolve the temporal myopia associated with the a-historic perspectives of contemporary ethnodevelopment paradigms attempting to re-inscribe (often instrumentally) Andean social practices and institutions, I develop a framework for analysis that focuses on the role of the *kamayoq* as an institution for political-economic integration. This analytic helps to account for the institutional role of the *kamayoq* in integrating regionalized production systems across both space and time, building out from the historical case of the *kamayoq*, rather than by imposing cultural appropriateness by virtue of pre-Hispanic origins.

This approach overcomes two shortfalls of the majority of historical scholarship on the *kamayoq*. First, historical accounts of the *kamayoq* have been subsumed within broader narratives of the political, cultural, or economic workings of the Inka state. The *kamayoq* have been treated as part of a functional background, rather than as constitutive of political-economic integration and change (see, for example: Canziani, 2012; Contreras, 2008a, 2008b; D'Altroy et al., 1985; Escobar Mansilla, 1997; Murra, 2009; Rostworowski & Morris, 1999;

⁵² The main argument and empirical content of this chapter appeared in an article with the same title in the *Journal of Historical Geography* (Yates, 2014).

Rowe, 1946). In early Spanish colonial chronicles and archives, we find a more complex history that reveals a network of *kamayoq* that upheld the Inka state as well as other historic modes of production and governance. While other Andean cultural and political components that supported the Inka state (such as the *quipu*) have been studied as historic phenomena, *kamayoq* are rarely placed at centre stage of historical analyses. *Kamayoq* have been used as an artefact to explain broader themes, and few scholars have sought to develop a historical understanding of the *kamayoq* as an important institution of Andean social life in its own right. I address this gap through a historical-institutional analysis of the *kamayoq*, which uncovers their important role in tying together production systems across both space and time.

The second shortfall is that research into contemporary *kamayoq* is limited to functionalist interpretations that fail to address how a historical-politics of knowledge reproduction underpins the term ‘*kamayoq*’. As a concept and a title, ‘*kamayoq*’ carries cultural and political meaning that has been historically produced: it denotes an individual who is respected by the broader community according to local customs and norms; and it imparts on that individual a political responsibility to reproduce and redistribute forms of technical knowledge that uphold a variety of livelihoods often described as ‘traditional’. Yet many contemporary analyses – in academia and the development sector – assume that *kamayoq* are ‘culturally appropriate’ simply by virtue of their pre-Hispanic origins. These analyses lack an adequate historical analysis of the *kamayoq*, thereby imposing contemporary normative assumptions and expectations (see, for example: Coupe, 2009; de la Torre Postigo, 2004; Hellin, 2013; Hellin, Coello, Rodriguez, Chañi, & Tayro, 2005; Hellin, De la Torre, Coello, & Rodríguez, 2006; Hellin & Dixon, 2008). This shortfall is not limited to the *kamayoq*, as other Andean cultural institutions (such as the *ayllu*, *ayni*, and *sumak kawsay*) have – at times – been adopted instrumentally within Westernized development paradigms. In addressing this shortcoming I therefore attend to the broader theoretical debates surrounding the revival and re-institutionalization of Andean social practices and the degree to which they offer the potential for cultural re-affirmation-in-practice, rather than an instrumentalization of culture in development.

The purpose of this chapter is not to prescribe indigeneity by defining *kamayoq*, nor to define *kamayoq* according to an imagined idea of Andean indigeneity, culture, or history; the chapter explores interconnected shifts in the meaning of *kamay*, and the relations of *kamayoq* to broader cultural and political-economic transformations. While maintaining a core ideal (of

expertise and specialisms in production and learning-by-doing), the notion of *kamay* and the practices of the *kamayoq* have transformed as their relevance has wavered according to shifting political-economic contexts. Their contemporary form cannot be separated from this historical process, which has taken shape in particular, spatially variable ways, even if their historic form has not *determined* their contemporary practices. To begin explaining this argument, I first discuss historically grounded analyses of Andean social practices, which help to set-up the analytical lens of political-economic integration. I then draw on historic data to explore the role of the *kamayoq* within the rigid, hierarchically organized structures of the Inka state, before pointing to the potential pre-Inka origins of *kamayoq* knowledge-in-practice, and briefly exploring the impact of Hispanic colonization. I conclude the chapter by arguing that the historical analysis necessitates an understanding of how diverse knowledges and practices are put to work as part of the rational means and technical forms of development that operates *across* different eras of colonial conquest and political-economic integration according to institutional forms that maintain their relevance often *despite* colonial pressures.

Kamayoq, Andean institutions, and political-economic integration

Proponents of contemporary ethnodevelopment paradigms might celebrate the revival of the *kamayoq* for their contribution to building “regionally specific visions of livelihoods, based on the ‘profound values’ of Andean social organization, technology, and philosophy” (Andolina et al., 2009, p. 56). This perspective revolves around the decolonizing principles of PRATEC – *el Proyecto Andino de Tecnologías Campesinas* (the Andean Project of Peasant Technologies) – a Peruvian organization dedicated to supporting processes of cultural affirmation in the Andes. In later chapters, I return to some of the decolonizing principles of PRATEC and how the organization might place the *kamayoq* alongside other re-popularized Andean institutions, such as *ayni* (a reciprocal relation) and the *ayllu* (a form of social organization). Before doing so, however, I first illustrate how a-historical approaches to the recovery of indigenous social practices and forms of social organization can cause these practices to be held-up (often uncritically) as empowering examples of pre-Hispanic institutions based on “sacred reciprocity” (Argumedo & Pimbert, 2010, p. 344). As Andolina et al. point out, PRATEC’s approach “casts the region – accurately – as a multiracial space, yet it subordinates this to general, supposedly preconquest [pre-Hispanic], principles. [This]

racial project thus constructs the region as a self-sufficient socio-environmental area, discarding modernity in favour of preconquest norms and practices” (Andolina et al., 2009, p. 56). Implicit in their argument is a critique of PRATEC for assuming that pre-Hispanic social structures in the Andes were more ecologically sound and socially just than their successors, and for potentially ignoring the fact that colonialism existed in the pre-Columbian era.

These kinds of perspectives risk separating indigenous culture and social practices from the long-running yet temporally variable historical discourses and practices of colonialism, through which the *kamayoq* – like any historic phenomenon – now operate (de La Cadena, 2010). Critics have therefore drawn attention to the possibility that contemporary ethnodevelopment paradigms associated with the recovery of pre-Hispanic practices – as is the case with the *kamayoq* – also serve to “cloak postcolonial development as usual” (Radcliffe, 2012, p. 248), particularly under the guise that pre-Hispanic equates to pre-Colonial. As Steve Wernke (2007) pointed out, many of these approaches – whether celebratory or critical – lack an awareness of pre-Hispanic colonialism and its effects, thereby cementing assumptions of categorical difference between European colonialism and its predecessors. The Peruvian literary historian, Rocío Quispe-Agnoli (2005), similarly argued that we need to understand pre-Hispanic forms of colonial subject formation, which can shroud the differentiated histories and identities of pre-Hispanic Andean societies and cultures (for example, by reducing pre-Hispanic Andean society to the broad category of “Inka”). It would be remiss, therefore, to ignore the ways in which the *kamayoq* fit within the (albeit quite distinct) colonial strategies of pre-Hispanic Andean societies and polities, and to assume that pre-Hispanic origins lend the phenomenon an inherently de-colonial property or effect. In this chapter I therefore explore the ways in which the *kamayoq* fit within various modes of production and political-economic organization across colonial eras. Prior to do so, however, it is worth contextualizing the analysis by locating the *kamayoq* in relation to scholarship on other revived and re-popularized pre-Hispanic social practices and institutions, as debates have emerged around whether these practices can offer an alternative path for contemporary development.

In a cultural ecological account of Andean production systems and cultural reproduction of Andean knowledge, Zimmerer (1996) pointed to the notion of *kawsay* – a production ethic that transliterates as a ‘fit livelihood’ (or as the ‘fitness of subsistence’), meaning a livelihood that is politically and ecologically sound, both historically and in the present. Despite being a conceptual ideal subject to historical change and social contestation, Zimmerer argued that

kawsay continues to structure territorial claims, labour autonomy, and livelihood capacities (Zimmerer, 1996). At the time, Zimmerer did not link this production ethic to broader conceptualizations of the cultivation of harmony within the Andean living world – an approach encapsulated by the related terms of *sumak kawsay* and *allin kawsay* (Grillo Fernandez, 1998a; Pardo Castillo, 2013). For organizations such as PRATEC, the organization co-founded and co-directed by Eduardo Grillo Fernandez and Grimaldo Rengifo Vasquez until the former's death in 1996, terms such as *sumak kawsay*, *allin kawsay*, and *misk'i kawsay* carry more-or-less synonymous holistic connotations, but they define each as 'lindo vivir' (beautiful life), 'buen vivir' (good life), and 'dulce vivir' (sweet life), respectively (Gomel Apaza & Gomel Apaza, 2002; Ishizawa Oba, 2013; Pardo Castillo, 2013; Rengifo Vasquez, 2002). While this contrasts some recent interpretations of *sumak kawsay* as 'vivir bien' (to live well) (Radcliffe, 2012) or 'buen vivir' (Hidalgo Flor, 2011; Villalba, 2013), the differences are largely semantic rather than substantive. In general, the concept refers to a place-based relational ontology, or Andean cosmovision, that regulates exchanges between people and their environment, human and non-human values, intercultural practices, and visions of the future, according to principles of sharing, reciprocity, and the recognition of non-human rights (or the rights of nature) (Gomel Apaza & Gomel Apaza, 2002; Radcliffe, 2012).

A growing body of work has emerged to explore the potential for this broad paradigm to offer a coherent conjunction of building on post-development critiques of exploitative models of capitalist development and developing viable alternatives *to* development (rather than *of* development) (Gudynas, 2011, 2014). Argumedo and Pimbert (2010, p. 344), for example, presented *sumak kawsay* as the material and spiritual basis upon which to build harmony according to "a rich and deep economic solidarity based on diversity, equity, self-management, ecological balance, and principles for economic efficiency". Yet some of these accounts run the risk of temporal myopia, as they seek to incorporate *sumak kawsay* into a "western...industrial model" (Thomson, 2011, p. 448). Scholars consequently asked whether the concept offers a form of counter-hegemonic expression or is simply a multi-cultural utopia open to elite capture, thereby masking post-colonial development as usual (Hidalgo Flor, 2011; Radcliffe, 2012). As Zimmerer (2012, 2013) has more recently elaborated, the concept's contemporary reinterpretation by indigenous movements remains fraught with contention even as it attempts to articulate Andean relational ontologies, and it remains open to state co-optation in order to reinforce governing power and moral authority. Practically implementing

sumak kawsay – especially at the national constitutional scale, such as in Ecuador – therefore presents a series of challenges, not least the need to accept a plurality of visions (from indigenous ontologies to Occidental modernist approaches), while at the same time finding common ground upon which to define a new development strategy capable of overcoming prevailing patterns of natural resource extraction and economic growth-based development trajectories (Villalba, 2013). These difficulties may stem from the fact that both commentators and practitioners of *sumak kawsay* come from, and operate within, different cultural paradigms and schools of thought, leaving fundamental questions open regarding the concept’s meaning, translation, origin, cultural referent, relation with development, and direction (Hidalgo-Capitán & Cubillo-Guevara, 2014).

While many of these accounts – including those emerging from Peruvian scholars and activists – stress the historical continuity of Andean living worlds and the relevance of Andean paradigms, there remains a tendency to romanticize these components simply on the basis of their pre-Columbian origins. These commentaries often over-stress the temporal difference evident in that fact that these indigenous knowledge systems and lifeways do not operate as they did before, rather than explain this difference through historical analysis. Despite growing into an increasingly coherent *contemporary* framework for organizing culturally contextual and potentially de-colonial alternatives to exploitative development trajectories (see: Gudynas, 2014; Plataforma de Co-partes de Tierra de Hombres de Alemania, 2013; PRATEC, 2002), the notion of *sumak kawsay* (and cognate concepts) continues to pitch a romanticized indigenous past (located in the a homogenized version of a diverse pre-Colombian era) against a monolithic Occidental present. This is done without uncovering the ways in which the concept has operated in and through various colonial and imperial discourses and practices for centuries. As Gastón Gordillo (2011) pointed out, such temporal binaries can produce racialized forms of indigenous history, restricting indigenous social practices, institutions, and forms of citizenship to an imagined past, and excluding them from contemporary productions of space, place, and nationhood. A spatial dynamic can be added to this, as *sumak kawsay* is depicted as a universalized cultural trait in the Andes, despite spatial variability in how the term is understood and deployed by different Andean cultural groups, as depicted in PRATEC’s documentation of the various interpretations adopted across Peru (PRATEC, 2002).

A similar limitation exists in relation to recent explorations of the role of the *ayllu* – an Andean form of social organization often simplistically equated to the western notion of a community, which in fact affiliates diverse human and nonhuman social groups, and involves mutually reinforcing administrative, ritual, and economic practices (Orta, 2013, p. 111). For Fabricant (2010), the contemporary political revival of *ayllus* in the Andes reflects some of the frictions between the romanticism of Andean cultures and the incorporation of indigenous mechanisms into neoliberal frameworks of values and rights. Reality is of course more complex than this dualism, as Andean social practices and institutions have persevered within or in opposition to colonial or state oppression, and yet have done so in ways often obscured to external observers (perhaps due to those forms of oppression).

Nonetheless, few accounts develop a historical analysis in order to understand – rather than simply state – these frictions according to shifting political-economic, social, and/or cultural contexts. Grimaldo Rengifo (1998), for example, is guilty of romanticizing the *ayllu* by presenting it as a temporally static social formation typical of the Andean way of being and unaffected by Hispanic colonial strategies, such as the *reducciones* (forced relocations). “The life of the *runas* [people]”, he argued, “is now a mode in which the *ayllu* has re-created itself” (Rengifo Vasquez, 1998, p. 119). With its emphasis on the equivalency of life (both human and nonhuman), cyclical regeneration, relational organicity (that is relational entanglements with nonhuman nature), and patterns of reciprocity and nurturance, Rengifo presents the *ayllu* as a self-reproducing yet diverse entity that exists in direct opposition to Eurocentric, colonial, and anthropocentric notions of homogenous community forms. While this may be the case in a discursive-ideological sense, it is difficult – as I explain in this chapter and the next – to argue that in practice Andean social practices and institutions exist as self-reproducing entities outside of centuries of colonial influence (both Hispanic and pre-Hispanic). To understand the contemporary potential of a re-affirmed Andean living world through notions such as the *ayllu*, more historical nuanced accounts are required in order to uncover processes of co-production over time.

Erazo (2010, 2013) has taken some steps in this regard, having illustrated that indigenous leaders in Ecuador have served both as conduits for the subjectivity-shaping projects of the state and NGOs, *and* as generators of new forms of citizenship and ‘organized living’ that help to ensure the future viability of their lifeways, cultures, organizations, and political autonomy. Similarly, Wernke’s (2007) trans-conquest view of community change in the Andes revealed

the co-constitutive relation of local and colonial structures of power, as *ayllus* are better understood according to political-economic changes in production and land governance than on the basis of Murra's ecozones concept. This trans-conquest approach helps to build an understanding of contemporary forms according to their historical constitution (which does not equate to causation), rather than simply in terms of their divergence from an imagined indigenous past. Andrew Orta deployed a similar analytical frame, arguing that the *ayllu* has maintained (fraught) relevance as “a repertoire of economic practices that has waxed and waned in relevance and effectiveness under different sorts of pressures in different historical moments” (Orta, 2013, p. 113). Such an approach contrasts Rengifo's (1998) assertion that the *ayllu* has always maintained a complete resistance to external pressures, colonial or otherwise. It also moves beyond his reticence towards institutionalization: “these official institutions”, he argued, “have not politically institutionalized the community or *ayllu*; instead they have been incorporated in diverse modalities of carrying out the *cargo* [charge, or responsibility]” (Rengifo Vasquez, 1998, p. 115).

For Rengifo, then, Andean social practices are not institutionalized across time – a perspective that I contrast below with evidence of temporally continuous process of institutionalization, albeit according to the ‘diverse modalities’ pointed to by Rengifo. These *cargos* to which Rengifo referred in fact raise some parallels with the *kamayoq*. A *carguyoc*, he argued, is an individual with a responsibility for a particular activity, and this responsibility is exchanged on a temporally reciprocal basis (i.e. by rotation). As I explain below, this overlaps somewhat with definitions of a *kamayoq*, but according to Rengifo, “the *cargo* is not a political administrative function with ritual trimmings, it is rather a rotating ceremony in which all the communities participate...the *cargo* is not a regulated exercise with a political administrative character carried out by the members of the human collectivity [*sic*] in order ritually to synchronize agricultural activities with the climate, astronomical, and social conditions of the *ayllu*. Such an assessment is the product of an anthropocentric perspective” (Rengifo Vasquez, 1998, pp. 113-114). Again, this may be an appropriate discursive-ideological point, but as I illustrate in this chapter, empirical evidence points to the fact that the effects of such an anthropocentric perspective began to take hold long before the arrival of the Spanish. As a particular type of *carguyoc*, the *kamayoq* has long contributed to the forms of political institutionalization that Rengifo argues are not evident in the Andean living world.

Further parallels with the *kamayoyq* can be seen attempts to revive Andean ways of knowing by placing emphasis on the notion of *yachay*. Although loosely glossed as ‘knowledge’ or ‘knowing’, *yachay* been explored as a counter-hegemonic response to global colonial epistemologies (Stobart & Howard, 2002). *Yachay* is conceived as a dynamic, transformational, and continuous process of coming into being (Crickmay, 2002; Howard, 2002), and with its roots in community production and cultural practices, the re-inscription of *yachay* becomes a political act that re-asserts Andean forms of production and re-production (Garcés, 2012; Schiwy, 2009). For Grimaldo Rengifo (2008b) and organizations such as PRATEC, *yachay* links the educational culture of Andean communities to agricultural production (and the *chacra*, or fields) as a foundation of Andean culture and diversity. The related notion of *iskay yachay* (double knowledge) refers to the reciprocal exchange of two knowledges among Andean communities, which results in multiple suggestions and possibilities for nurturing life rather than a technical manual (Ishizawa Oba & Rengifo Vasquez, 2009; Rengifo Vasquez, 2010). There are therefore parallels with the notion of *kamay*, suggesting that both concepts meet Briggs’ (2013) request that development focuses more on an epistemology of indigenous knowledge as a way of knowing, as a process, or as a practice. As I explore in this chapter and the two that follow, however, the instrumental incorporation of *kamay* risks creating a permanent shift from dynamic forms of continuous knowledge-in-practice to static forms of knowledge-on-display, thereby undermining the kinds of cyclical regeneration

Nonetheless, these forms of Andean scholarship point to a more rigorous historical approach that dissects the tensions and contradictions involved in re-institutionalizing indigenous social practices (often romanticized on the basis of their pre-Hispanic origins). Perhaps most compelling, however, is Frank Salomon’s (2004) ethnohistory of *kipus* and the related contemporary *kipucamayos*.⁵³ In contrast to the majority of historical works on the *kamayoyq*, which are subsumed within a broader analysis of the Inka state, Salomon uncovered an “ethnographic recent past... devised for heuristic purposes, without imputation of real-world timelessness”. From a historic perspective, he challenged the assumption that the

⁵³ Salomon’s use of *kipucamayo* reflects a contemporary re-articulation of the term *quipu* (or *kipu*) *kamayoyq*; while the latter was a Quechua term used to refer to a *quipu* master or expert (as I explain in this chapter), the former has been adopted in contemporary Andean villages to refer to the physical skein of knotted cords.

relevance of the *kipus* ended in the early period of Hispanic colonialism. From a contemporary perspective, Salomon explored the links between *kipus*, social action, and political organization. Although his contemporary ethnographic studies do not simply mirror historic *kipus*, his ethnohistory – he argued – indicates a continuous relationship between inscription (*kipus* as a form of writing) and Andean social complexity. Thus, Salomon concluded by asking the reader to “suspend historical caution” as he made direct comparisons between contemporary and historic *kipu kamayoq*, addressing the ways in which each facilitated an articulation between kinship and broader levels of political organization. While attentive to temporal difference, and mindful of the distinction between ‘grass-roots’ and ‘Imperial’ *kipus*, Salomon revealed an ethnographic recent past in order to shed light on a deeper historical limitation of our knowledge about the *kipus*, illustrating a series of links between known *kipu* specimens and known social functions. Salomon’s useful approach supports Lyn Fendler’s (2008, p. 690) argument in favour of “strategic presentism”: when “history is written with present assumptions in mind, then practices may become less naturalized, less reified, and more susceptible to study”.

How, then, to develop an account of the *kamayoq* that acknowledges the *present* need to understand the historic and contemporary form of the concept and practice, without drawing causal, romantic, or teleological analogies and conclusions? In acknowledging present conditions and needs, such an account should also avoid the notion that pre-Colombian concepts-in-practice, such as the *kamayoq*, the use of *kipus*, and the perseverance of the *ayllu*, simply disappeared only to be revived under post-colonial conditions of incorporating them into Western-driven development paradigms. In an attempt to provide such an account, I draw on Karl Polanyi’s (1957a, 1958, 1977) theorization of an integrated economy to develop a temporal approach to the ways in which institutionalized social practices are formed and reformed under particular (spatially differentiated) contexts.

While Polanyi’s insights offer just one route of explanation, they usefully help to locate contextual and specific process of transformation within broader political-economic and institutional-structural trends. It is important to note, therefore, that I draw not on the Polanyi of *The Great Transformation* and ‘double movements’, but on the economic ethno-historical Polanyi who drew on grounded, contextual evidence from areas such as Mesopotamia (the Old Babylonian state) and ancient Greece to explore shifts in economic systems, institutions, and forms of political organization. Anthropologists have recently recognized this deeper influence

of Polanyi, and they have drawn on his conceptual tools to understand how markets exist alongside other, institutionally embedded forms of organization in contemporary contexts (Hann & Hart, 2009; K. Hart, 2008). As Gregory (2009, p. 159) pointed out, “we can usefully draw on intellectual ancestors such as Polanyi because their concepts, limited as they are by history and geography, have substance that allows them to be modified for new times and places. The more important conclusion to be taken from Polanyi, however, is that theoretical advances must be grounded in historical and ethnographic work”.

It is also worth noting that Polanyi adopted a form of strategic presentism – or perhaps more accurately, strategic historicism. In the post-war years – after the publication of his magnum opus *The Great Transformation* (1957b) – the ‘witch-hunting’ of communist and Marxist sympathizers consigned Polanyi to a life of academic transit, and drove him to writing in what Rhoda Halperin described as “a sort of code, so as to avoid any association with Marx during the 1950s” (1994, p. 43; also see Peck, 2013b). Part of this code entailed masking his critique of capitalism in a focus on pre-modern economies, which he adopted as a kind of surrogate to advanced capitalist societies in order to present a more general critique of economic concepts. His motive for developing a historical approach to the comparative, institutional analysis of the differences between and within local economies was therefore rooted in the present (Peck, 2013b, 2013c).⁵⁴

Polanyi used the notion of economic integration to describe the ways in which economic processes that “overcome the effect of space, time, and occupational differentials” are institutionalized to create inter-dependence. The main forms of integration are reciprocity, redistribution, exchange, and the “historically important” pattern of householding (Polanyi, 1958, p. 330; 1977, pp. 35-36). These are largely universal characteristics of integration, but their articulation is deeply contextual and spatially variable according to histories of institutional embeddedness; the functioning of these forms of integration are dependent upon institutional structures, which both emerge from and (re)produce social relations. D’Altroy and Earle (1985) have previously described the Inka political economy in the Andes as a form of Polanyian integrated economy, and yet the role of institutional components such as the

⁵⁴ Given the rather cryptic nature of much of Polanyi’s work, Jamie Peck (2013a, 2013b, 2013c) has made the case for a Polanyian substantive economic geography, moving beyond a reduction of his work to the trope of a double movement, instead paying attention to embeddedness and institutions in comparative economics.

kamayoq has been left under-explored. Given that there is no linear progression to integration (forms of integration do not represent stages of development), we need to uncover the ways in which particular institutionalized processes have facilitated economic integration across modes of political-economic organization (Polanyi, 1957a). Such a perspective sheds light on the role of the *kamayoq* in pre-Inka, Inka, and early Spanish colonial periods, when forms of integration fluctuated and usually appeared as co-dependent hybrids.

I deploy a temporal, comparative approach in order to open up the areas of fruitful comparison that Polanyi called for, and to understand political-economic formations in relation to their alternatives, both far and near (in time). I use the case of the *kamayoq* to explore how the local, contextual practices of the *kamayoq* and the trans-local processes of an integrated economy are co-constitutive across time, thereby revealing how political economic processes are “instituted at different times” (Polanyi, 1959, p. 168). This Polanyian approach is suited to uncovering the institutional role of the *kamayoq* across time. As Jamie Peck has explained, “Polanyian economic geographies...should seek to be historically grounded and socially integrative, and they should not only recognise socio-economic diversity but explicitly problematize the (often contradictory) relations between different modes of economic organization” (Peck, 2013a, pp. 28-229). In short, a Polanyian perspective on the *kamayoq* offers the advantage of being “institutionalist all the way down...[by] exposing social constructions and institutionalized patterns...through the exploration of alternative socioeconomic arrangements” (Peck, 2013b). This approach to the institutional function of the *kamayoq* within integrated political economies moves beyond the instrumental reincorporation of the *kamayoq* within ethnodevelopment frameworks, as it offers a grounded perspective that builds out from the historical evidence instead of imposing contemporary assumptions about the value of cultural practices and institutions.

A Polanyian perspective therefore raises questions about the historic role of the *kamayoq* that go beyond existing treatments within historical accounts of the Inka state, for example. How did the *kamayoq* help to reproduce the various institutional preconditions necessary for integration, and how does this affect our understanding of instrumentally reviving the phenomenon within the frame of ethnodevelopment *technique*? We can take this question forward to address the contemporary revival of the *kamayoq*, albeit under entirely different circumstances that may not be causally linked to previous forms of integration: given that exchange has become the dominant – though by no means *only* – means of economic

integration, do the *kamayoq* continue to play an important political-economic role? How has the internal structure of the *kamayoq* system adapted to the shifting environments of economic integration? Developing Polanyi's approach in this way yields a spatio-temporal approach to the institutional analysis of the *kamayoq*, thereby attending to context and specificity, and revealing how political-economic integration rests, in part, on the institutionalization and inter-connection of these contextual processes.

**“Let these officials not be missing in the kingdom, because if they are they
will be punished as lazy or as thieves”⁵⁵: *kamayoq* and the governance of production
in the Inka political-economy**

I begin with an analysis of the *kamayoq* under the Inka, when their role was arguably most clear and established. Early colonial etymological interpretations of the root verb ‘*kamay*’ provide a useful starting point for analysis, as three core interpretations were operationalized simultaneously: administrative, productive, and socio-mythological.⁵⁶ Adding the *-oq* suffix to *kamay* implies that the root verb is possessed by an individual and subsequently mobilized or realized; *kamayoq* were therefore practitioners of *kamay*. These three etymological interpretations correspond to the ways in which the *kamayoq* were institutionalized within three corresponding realms of the Inka political economy: administrative governance; agricultural and commodity production; and socio-cultural reproduction. Space constraints prevent a full explanation of these complex hierarchies or of the specific roles of each *kamayoq* (see Table 1); the point is to illustrate that the *kamayoq* were internalized within the structural hierarchies of the Inka state to enable its policies and strategies of expansion, colonization, and economic integration.

Before exploring how the *kamayoq* helped to sustain these regionalized production systems, it is worth contextualizing their position within Andean social and political arrangements. The *kamayoq* were part of a social group known as the *runa* – a term still used today in the Southern Andes to refer to ‘people’, ‘common people’, or ‘country people’ (de la

⁵⁵ Guaman Poma de Ayala's (2009, p. 146) depiction of the formal role of the *kamayoq*.

⁵⁶ These etymological interpretations appear in a variety of early colonial chronicles of the Inka state, as well as Quechua dictionaries from the same period.

Torre Postigo, 2004). However, the term has its origins in Andean cosmovisions, which distinguish between communities of people (*runas*), communities of sacred elements and deities (*guacas*), and natural communities (*sallqa*) (Rengifo Vasquez, 1998). All of these are supposed to be brought together in harmony within the *ayllu*, which affiliates diverse human and nonhuman groups, and involves mutually reinforcing practices among those groups (Orta, 2013). In contrast to the term ‘human kind’, therefore, *runa* does not radically separate *homo sapiens* from all other species; rather the *runas*, *sallqas*, and *guacas* are all intertwined in an inseparable, mutual relationship (Rengifo Vasquez, 1998).⁵⁷ Later in this chapter, I return to the importance of this mutual relation to explain the role of socio-cultural reproduction performed by the *kamayoc*, as well as to contextualise the discussion in chapter seven.

Under the Inka, however, the term *runa* shrouded complex ethnic and socio-spatial divisions. The Inka established a system of labour tax that produced a distinction between *mit'a* (a local pool of *corvée* – or tribute – labour, also known as *mitayos*) and *mitmaq* (or *mitimaes/mitmas* – a forcibly displaced pool of *corvée* labour) (Canziani, 2012; Contreras, 2008a; Murra, 2009). According to Rostworowski and Morris (1999), much of the *mit'a* population was comprised of “tribute-paying plebeians”, known as *hatun runa* (‘big people’), who were farmers and herders who took care of the camelid herds belonging to the Inka, the sun (*Inti*), and mother earth (*Pachamama*).⁵⁸ They lived in scattered communities or isolated homesteads, and provided agricultural labour to their communities and to the state (D'Altroy et al., 1985). In contrast, *mitmaq* labourers were those displaced from their ethnic heritage in order to sustain the proliferating number of urban units within *Tahuantinsuyu* (the Inka state) (Canziani, 2012). Members of this working class of *mitmaq* (or *mitimaes* or *mitmaqkuna* (Hastorf, 2002)), consisting of many different ethnic groups, were forcibly relocated to foreign regions for the political purpose of weakening or controlling resistance in rebel regions. Entire populations were also moved for public development works and production management in areas where the state undertook agricultural expansion projects. This process of relocation produced a class known as *yana* (or *yanakuna* (Hastorf, 2002; Murra, 2009)) – those deemed

⁵⁷ The term *runa* also has complications of its own, as it can carry an implicit message of gender inequality, is often interpreted as is synonymous with the local Spanish-language usage of *runa*, which is a racist pejorative, and does not address diversity amongst the *runa* (such as between distinct cultural groups in Ecuador and Peru) (Salomon, 1999).

⁵⁸ *Mit'a* referred to the rotational labour system; the labourers came to their position by way of *mit'a*.

to be of servile character, who had generally lost their ethnic identity as a result of war or the repression of rebellions. In contrast to the *mit'a* labour force, both *mitmaq* and *yana* were put to work by Inca nobles on projects of urban development, and had no ties to the production of communities based on notions such as reciprocity or the collective. For Rostworowski and Morris (1999), this process reflects the most radical way of attaching labour to the state, as it completely detached the labour force from its community systems.

The *kamayoc* were part of the *mit'a* population, but they operated in an elevated position. The *mit'a* labour force was rotated on a yearly basis to work the fields, and was managed by a permanent force of individual *mit'a kamayoc* (or *mit'ayoc*). Both *mit'a* and *mit'ayoc* were remunerated by the Inkan state in the form of food and other necessary goods, which were provided relative to the labour and output provided by these work forces (Murra, 2009). At times however, particular *kamayoc* were deemed so important to the functioning of the Inka state that they were exempt from the labour tax (Rowe, 1946), and enjoyed positions of influence over the agricultural products and commodities that the Inka required in order to uphold their system of *corvée* labour and entreaty (forced reciprocity). Yet as the title of this section implies, the relative privileged position of the *kamayoc* was not optional: “Let these officials not be missing in the kingdom, because if they are they will be punished as lazy or as thieves...there were great punishments for thieves...they got the death penalty; and for liars and the lazy” (Guaman Poma De Ayala, 2009, pp. 50, 146).

How, then, did this interconnected network of different *kamayoc* operate within these strict structures of the Inka state? Table 1 contains a list of different *kamayoc* according to the three realms introduced above: administration and direct governance; agricultural and commodity production; and socio-cultural reproduction. **Figure 7** represents graphically the way in which just some of these different *kamayoc* were interconnected as a part of a hierarchical web of Inka governance structures; the point is simply to illustrate that a degree of difference existed within the category of *kamayoc*, with some answering directly to the royal *tukuyriqoc* (such as the *llacta kamayoc*), while others were expected to ensure that the everyday processes of agricultural and commodity production were achieved efficiently and effectively (*chacra kamayoc*; *qiro kamayoc*). In what follows, I explain how the *kamayoc* functioned within the three realms indicated in **Table 3**.

Table 3 List of *kamayoc* by sector (spelling according to source)

Sector	Name	Duty/expertise	
Direct governance	Administrative governance	<i>Incap quipoc camayocnin</i>	Inka's official <i>quipu</i> interpreter
		<i>Llacta (llaqta) camayoc</i>	Town official, responsible for conducting a regular census; 'ruler of the people'
		<i>Qollqa (collca) camayoc</i>	Granary masters; storehouse official
		<i>Quillca camayoc</i>	Secretaries of the Inka; scribes of the <i>quipu</i> (knotted chord)
		<i>Quipo camayoc</i>	Foremen; overseer of Inka's <i>quipu</i> (<i>quipu</i>)
		<i>Quipu (khipu) camayoc</i>	Accounting; collection of deeds for bureaucratic superiors; 'turnkey' in charge of chests of communal property
		<i>Mit'a kamayoq (mit'ayoq)</i>	Those in charge of the <i>mit'a</i> labour force
		<i>Rumi ch'iquq kamayoq</i>	Specialist stoneworker for state roads and bridges
		<i>Sapsi camayoc</i>	Community officials; administrators of the commons
		<i>Tampu kamayoq</i>	Responsible for the procurement and distribution of goods
	<i>Taza (tasa) camayoc</i>	Tax collectors (literally 'rate <i>kamayoc</i> ')	
Defence & enforcement	<i>Auca (awca) camayoc</i>	Warriors; organizational leaders	
	<i>Chacnay camayoc</i>	Torturers	
	<i>Chaka camayoc</i>	Governor of bridges (related to the provincial <i>chaka suyuyoq</i>), or specialists in bridge construction	
	<i>Guaca (huaca) camayos</i>	Guards of symbolic treasures or revered artefacts	
	<i>Hochaycamayoc</i>	He who holds the position of punishing crimes (judge)	
	<i>Pucara camayoc</i>	Fortress officials/supervisors	
	<i>Uatay camayoc</i>	Sheriff, constable, captor, major peace officer (<i>incap camachinan chinan uatay camayoc</i> - official who made arrests)	
Production	Agro-pastoral production	<i>Chacra camayoc</i>	Expert labourers, responsible for the fields
		<i>Chalua camayoc</i>	Fisherman/fish official
		<i>Coca camayos</i>	Coca growers
		<i>Hachakachi camayos</i>	Cattle rancher, livestock keepers, animal husbandry
		<i>Paqocha kamayoq</i>	Alpaca husbandry
		<i>Unu (cocha) kamayoq</i>	'Guides of water'; irrigation specialist
		<i>Uywa kamayoq</i>	Specialists in managing and preserving livestock biodiversity
		<i>Weša kamayoq</i>	Shepherd
		<i>Yanca kamayoq</i>	Weather forecasters (for agricultural sowing times)
		<i>Yegua camayo</i>	Horse breeders (literally 'mare <i>kamayoc</i> ')
Commodity production	<i>Aua (away) camayoc</i>	Cloth weaver	
	<i>Aucacamayo huarmin</i>	Weavers of upholstery for the State	
	<i>Q'umpi (kumpi/cumbi) camayoc</i>	Fine cloth weaver; master weaver; embroiderers; silk workers	
	<i>Llaillac quirocamayoc</i>	Woodworkers; carpenters	
	<i>Qiro kamayoq</i>	Cup specialists	
	<i>Qolqi kamayoq</i>	Silversmiths	
	<i>Soño (sañu) camayoc</i>	Potters; ceramics specialists	
<i>Tanti kamayoq</i>	Cloth dyeing specialists		

Sector	Name	Duty/expertise	
Socio-cultural re-production	Mythical-symbolic	<i>Camallicuy camayoc</i>	Great sinner (' <i>gran pecadorazo</i> '; <i>pecador</i> = sinner)
		<i>camaçapa</i>	
		<i>Chunca camayos</i>	Counter, gambler, or specialist in the game <i>chunca</i>
		<i>Guaca (huaca) camayos</i>	Expert oracles, or those in charge of oracles; soothsayers
		<i>Mallku kamayoq</i>	Person in charge of servicing the god of water
		<i>Nina kamayoq</i>	Spiritual guides; wise Andeans
		<i>Poñoy (punuy) camayoc</i>	Sleepyhead; 'professional dreamer' or 'dream sorcerer'
		<i>Uacanqui (wacanqui) camayoc</i>	Love charm sorcerer; masters of <i>uacanqui</i> (amulets worn by women who had the power to deceive men)
	Socio-cultural services	<i>Cumo punco camayoc</i>	Humpbacked door official
		<i>Hampi camayoc</i>	Surgeons; herb masters
		<i>Palol kamayoq</i>	Doorman
		<i>Pincollo camayoc</i>	Flutists
		<i>Riui camayoc</i>	Officials of the <i>riui</i> (stringed instrument)
		<i>Wasi kamayoq</i>	House guardian
<i>Wicsa allichac hampi camayoc</i>		Stomach curer medical specialists (stomach healer herb master)	

(Sources, in addition to interviews: Adelaar & Muysken, 2004, pp. 254, 494; Arnold & de Dios Yapita, 2006; Betanzos, 1996, pp. 57, 109, 278; Brokaw, 2003; Canziani, 2012, p. 436; Crickmay, 2002, p. 45; D'Altroy et al., 1985, p. 195; de Albornoz, 1967, p. 22; de Avila, 1991; de Cieza de León, 2005; de la Ebandera, 1986, p. 503; de la Torre Postigo, 2004, p. 9; de la Vega, 1609, pp. 98, 212, 221, 228; Duviols, 1974; Escobar Mansilla, 1997; Espinoza Soriano, 2008; Gonzalez Holguin, 1608; Guaman Poma De Ayala, 1615/1616, pp. 345, 887, 1132; 2009, pp. 142, 146-147, 254, 171, 274, 270, 286, 315, 340, 344-145, 362, 366, 383; Lane, 2009, p. 183; Lorandi, 1984; Mayer, 2004, p. 101; Mejía Martínez & Sotomayor Berrio, 2011, p. 13; Miguel Glave, 2008, p. 329; Murra, 2009, pp. 43, 47; Rowe, 1946, pp. 245, 268, 297; Salazar-Soler, 2008, p. 188; Salomon, 2004; Suárez Espinosa, 2008, p. 294; van Immerzeel, 2006, pp. 43-45, 49-53, 56, 105, 143, 151; Zwartveen, Udas, & Delgado, 2010, p. 88).

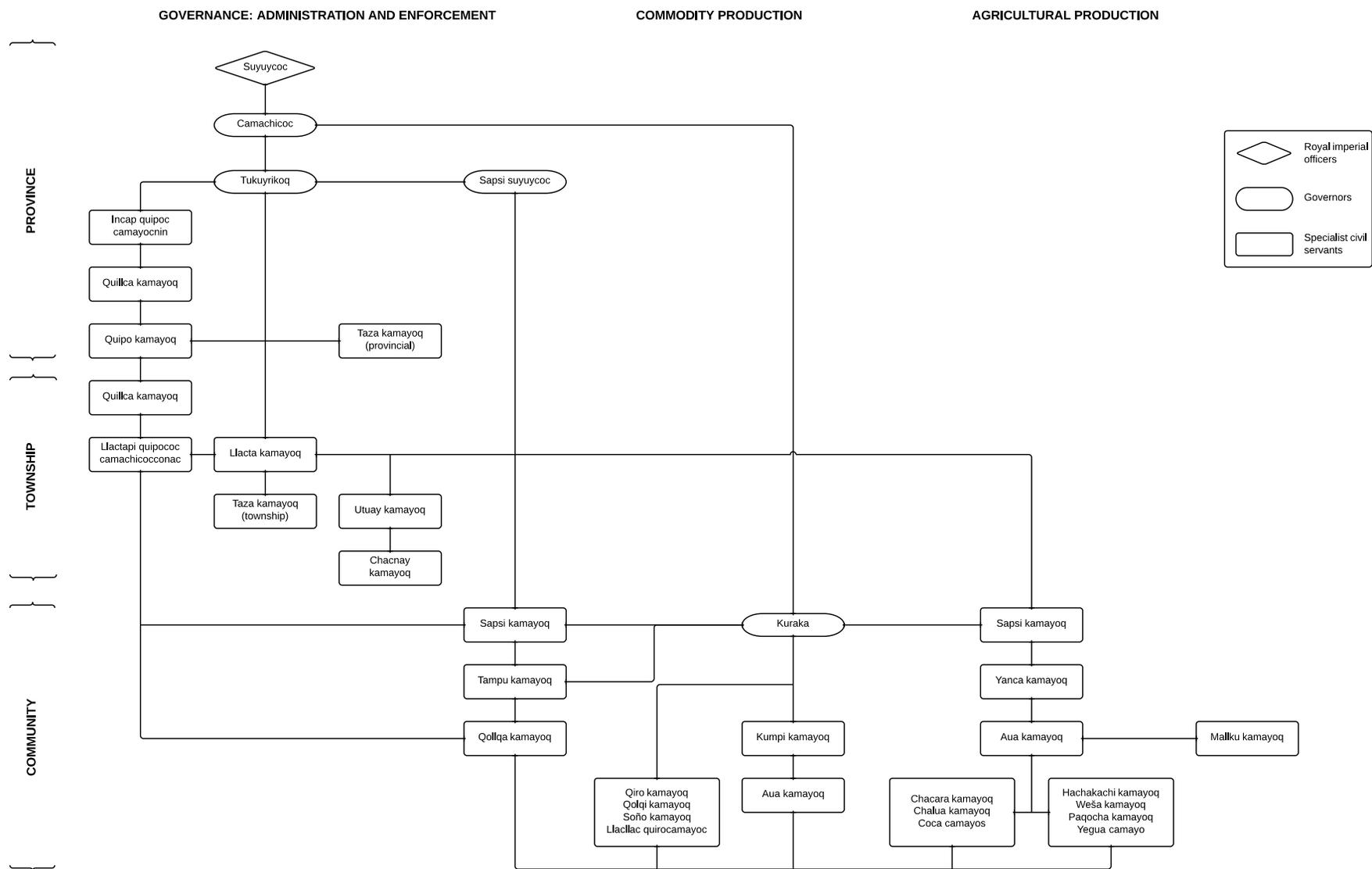


Figure 7 Hierarchies *kamayoq* in Inka governance structures

Administrative interpretations of *kamay* point to a political-economic view of the social reproduction carried out by *kamayoq*. These interpretations were derived from definitions of *kamay* as “to be in charge over”, “to be obligated”, or “to administer”; *kamayoq* were therefore glossed as officials, officers, or stewards (Adelaar & Muysken, 2004, p. 495; de la Vega, 1609, p. 97; Gonzalez Holguin, 1952). Under the Inka, *kamayoq* either served to link, or were directly incorporated within, the hierarchical system of state administration, particularly in governing the pool of *corvée* labourers and in accounting for, managing, and distributing the staple and wealth goods that enabled the Inka state to meet its disparate economic requirements. A hierarchy of different types of *quipu* (or *khipu*) *kamayoq* (**Figure 8**), for example, served as an articulation between the village polity and Inka imperial hierarchies by providing accounts and reports of people and production to provincial governors known as *tukuyrikoq* (Guaman Poma De Ayala, 1615/1616; Salomon, 2004).⁵⁹ A *quipu kamayoq* at the level of the township was linked horizontally to the *llacta kamayoq* – a town official, or “ruler of the people”, responsible for collecting taxes (via the *taza kamayoq*) and keeping a census of people, livestock, and crop output (Betanzos, 1996; de la Vega, 1609, p. 212).

These accountant-like *kamayoq* helped to establish what Polanyi would have referred to as the equivalency of fungible things, which were used as a kind of money according to established standards of exchange (Polanyi, 1958). The Inka used fungible things – including staple goods such as corn and Andean grains, and wealth items such as cloth – in order to support both their system of reciprocal redistribution (via ‘entreaty’; forced reciprocity) and the integration of exchange mechanisms with coastal and Amazonian regions already engaged in market-like transactions (D'Altroy et al., 1985). In their methods of measuring and accounting, these *kamayoq* served to establish the socially defined situations and mechanisms by which reciprocity, redistribution, and exchange could coexist. These conditions were then ruthlessly enforced, often with the help of officials such as *uatay kamayoq* (sheriffs), *chacnay camayoc* (torturers), and *auca kamayoq* (glossed as warriors skilled in the art of beheading enemies or traitors; **Figure 9**) (Guaman Poma De Ayala, 1615/1616, pp. 142, 146, 148, 171).

⁵⁹ The *quipus* were not just used for accounting, but were also underpinned by deeper cultural sentiments, as they were used to record oral histories (Mayer, 2002; Urton, 1997). Guaman Poma’s account was even written according to *quipu* logic (Arnold & de Dios Yapita, 2006, pp. 31-32). *Quipus* also shaped forms of “vocal writing”, such as tales, myths, songs, and poems, with actors playing determined roles within a logical order or predetermined pathway (Arnold & de Dios Yapita, 2006).

Kamayoq therefore participated in direct forms of governing – of enrolling and accounting for territories within the Inka system of entreaty, and of punishing those who refused or betrayed the centralized system. In helping establish these social conditions for economic integration, administrative *kamayoq* collaborated with a parallel hierarchy in the productive realm. Productive interpretations of *kamay* – which point to an ecological view of social reproduction among the *kamayoq* – derived from definitions of *kamay* as ‘to make’, or as the possession of a productive skill. Here, the *-oq* suffix reflects a *continuous* process of ‘coming into possession’ of a skill, rather than a temporally fixed exertion of control over resources and materials (Crickmay, 2002). The related hierarchy of *kamayoq* consisted of *sapsi* (Figure 10), *tampu*, and *qollqa kamayoq* (Figure 11), who together were responsible for accounting, collecting, managing, and distributing productive output. These *kamayoq* were technically skilled and bureaucratically savvy, facilitating the accumulation of staple and wealth finance, which sustained the Inka political economy, their expansionist ambitions, and entreaty.

The *qollqa kamayoq*, for example, managed the accumulation of dried foods and other storable commodities that the Inka ordered be maintained for times of shortage. To store the large quantities required by Inka nobility, a vast complex of *qollqas* (storehouses; see Figure 11 and Figure 16) was developed throughout *Tahuantinsuyu*. In populated and important locations there were thousands of *qollqas*, such as in the Upper Mantaro Valley, where storage capacity has been estimated at over 4.5 million bushels, making it – according to Browman (commentary in D’Altroy et al., 1985, p. 198) – the largest known storage complex of the “prehistoric New World”. *Qollqa kamayoq* were therefore skilled in the two techniques that were used to ensure that the stored foodstuffs lasted throughout the agricultural off-season: pre-storage processing, such as jarring and freeze-drying; and, engineering and controlling storage environments, particularly by building thick walls, small doors, and thatched roofs to keep the interior of the *qollqas* cool (see Figure 16) (Rostworowski & Morris, 1999).

To do their jobs, these expert administrators of production had to be well connected to local and regional supply chains of both staple and wealth finance. Thus, from the bifurcated system of *corvée* labour (which produced a distinction between the local *mit’a* and the forcibly relocated *mitmaq*), also emerged a more horizontally organized hierarchy of *kamayoq* dedicated to governing both agricultural and commodity production (Canziani, 2012; Murra, 2009). The former – which included *chacra* (Figure 12), *yanca*, *uywa*, *unu*, and *weša kamayoq* – managed production on state *and* community lands, thereby governing the production of

staple finance, maintaining access to the land, labour, and herds that determined Inka wealth, and upholding the diverse production zones of the Inka state. Despite “arrogating to itself the rights to all productive resources in the empire, including agricultural and grazing land, undomesticated biota, and raw materials for craft production” (D'Altroy et al., 1985, p. 189), these elements were not directly taxed or raided by the Inka nobility.

Rather, in addition to maintaining the productive, subsistence capacity of the population (which existed alongside the centrally-organized surplus-oriented production system), *kamayoq* helped to extract surpluses from the agricultural sector through increased work output and technological improvements (Mayer, 2002). To link the vertically tiered production zones that maintained Andean production systems (Murra, 2009), and to manage the problems of production within a given zone, Mayer (2002) argued that a supra-household level of organization brought together technical and administrative experts. The agricultural *kamayoq* fit this conceptualization, as they mobilized local groups and individual producer households, with the aim of ensuring that both labour and agricultural output were incorporated into the Inka system of entreaty. Chronicles reveal that agricultural *kamayoq* acted as local authorities that made important decisions throughout the growing season (such as sowing times) and enforced established rules (by administering fines and reporting problems) (Guaman Poma De Ayala, 1615/1616). They were mediators between the individual interests (of autonomy-seeking households) and collective aspirations (of associated production), the combination of which defined production in Andean communities, but varied between production zones according to particular balances between communal controls and household freedoms.

Kamayoq, however, were not confined to arbitrating agricultural production; they also governed the production of valuable commodities for insertion into the reciprocal political economy. Such production and circulation of commodities was an under-emphasized element of the Inka political economy: “to assert that [labour tax] was the sole means of state finance obscures a range of systematic economic interactions based on goods, especially among elites” (D'Altroy et al., 1985, p. 196). This circulation of wealth goods as political currency was facilitated in two ways by Inka nobility, and upheld by commodity-producing *kamayoq*: the direct accumulation of finished goods via obligatory gifts from local elites to the state; and the conversion of staple goods into exchangeable wealth items by tax exempt, craft specialists. The Inka nobility used these wealth items to uphold their system of entreaty (by showering local elites with gifts) and to facilitate trade with coastal and Amazonian regions.

At the centre of this system was the *q'umpi* – an intricately woven cloth of both symbolic and financial value due to its skilled-labour investment, its visibility as a status marker, and its storability (Murra, 1962). A hierarchical network of *kamayoq* (Figure 7) was central to upholding both the use and exchange values of the *q'umpi*, thereby sustaining regional ‘textual politics founded in cloth’ (Arnold & de Dios Yapita, 2006, p. 20). At the pinnacle of this sub-hierarchy were the *q'umpi kamayoq* – fine cloth weavers, embroiderers and silk workers, or master cloth weavers (Crickmay, 2002, p. 45; D'Altroy et al., 1985, p. 195; Guaman Poma De Ayala, 2009, p. 146; Miguel Glave, 2008, p. 329). These *q'umpi kamayoq* were sometimes the sons of local *kuraka* (Guaman Poma De Ayala, 1615/1616), and they – along with the more general *aua kamayoq* – drew upon the local corvée labour pool, including specialist female weavers not admitted to the status of *kamayoq* and known simply as *aqlla* (D'Altroy et al., 1985; Murra, 1962).⁶⁰ These *aqlla* presided over the *aqllahuaci* (*aqlla* house), where they, in turn, would put to work *mamakuna* – women taken from their places of origin as young girls to serve the *aqllahuaci*, and who were the female equivalent of the displaced *yana* introduced above (Rostworowski & Morris, 1999). Despite this gendered hierarchy, many female weavers were highly skilled and also trained in the art of the *kipu*, initially learning weaving patterns through counting before committing their weaving techniques to memory (Crickmay, 2002).

Other wealth items supplemented this textual political economy, particularly those derived from metals that were extracted from both state- and community-owned mines (Rostworowski & Morris, 1999). As the Inka state expanded and regional governance systems proliferated, Inka nobility began to rely on the procurement of special metals from local elites, who managed mining activities with their own hierarchy of specialists, including *qolqi kamayoq* (silversmiths), *qiru kamayoq* (cup specialists), and *soñocamayoc* (potters) (Lorandi, 1984; Rowe, 1946). These *kamayoq* were important in the shift away from a state finance system based solely on *corvée* labour, and towards one based on monetized state-local relationships constitutive of a Polanyian integrated economy (D'Altroy et al., 1985). *Kamayoq* were therefore agents of political-economic change, but they operated as such according to the strict institutional constraints imposed by broader systems of governance.

⁶⁰ Miguel Glave (2008, p. 383) conflated this hierarchy into the term *aucacamayoc huarmin* - upholstery weavers for the state.



Figure 8 *Quipu kamayoq*, holding a *quipu* (Guaman Poma De Ayala, 1615/1616, p. 360)

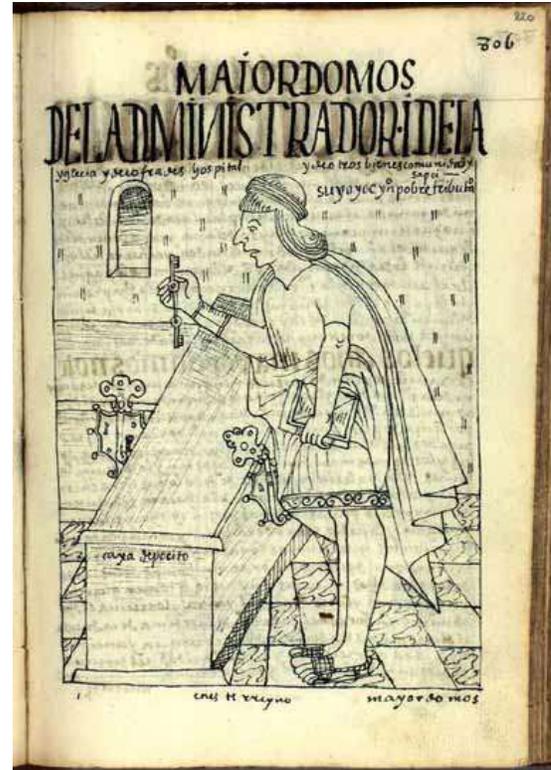


Figure 10 *Sapsi kamayoq* (Guaman Poma De Ayala, 1615/1616, p. 806)



Figure 9 *Auca kamayoq*, armed with an *ayri uallcanca* (hatchet) and *uma chuco* (helmet) (Guaman Poma De Ayala, 1615/1616, p. 196)

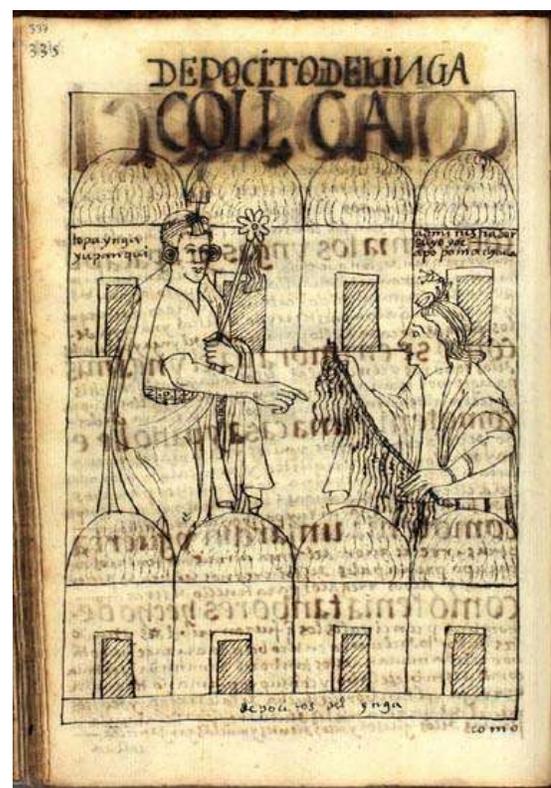


Figure 11 A *qollqa kamayoq* reporting to a *sapsi suyucoc*, amongst the *qollqas* (Guaman Poma De Ayala, 1615/1616, p. 335)

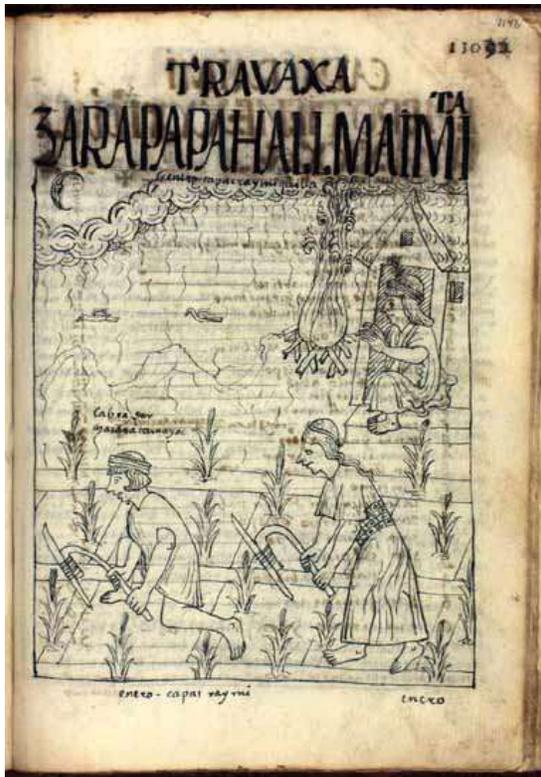


Figure 12 *Chakra kamayoq* and field workers (Guaman Poma De Ayala, 1615/1616, p. 1132)

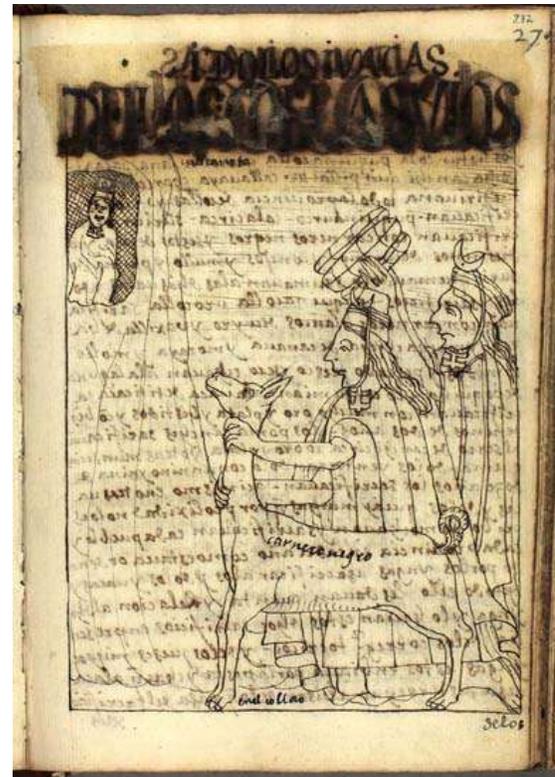


Figure 14 Offering an alpaca to the *guacas* (idols) (Guaman Poma De Ayala, 1615/1616, p. 272)



Figure 13 “Wrathful, arrogant Dominicans force native women [*aqlla* or *mamakuna*] to weave” (Guaman Poma De Ayala, 1615/1616, p. 659)



Figure 15 *Poñoy kamayoq* – a dream-oriented prophet (Guaman Poma De Ayala, 1615/1616, p. 145)



Figure 16 Reconstructed *qollqas* at Raqchi archaeological site (near Sicuani in Cusco). The site contains the remains of approximately 200 circular *qollqas* (rectangular *qollqas* were more common). The small entrances were specifically designed to help maintain internal climatic conditions; inside there was often a shelving system, allowing for the beneficial placement of goods according to such climatic conditions.

Finally, a cultural view of the social reproduction undertaken by *kamayoq* leads us to the mythological interpretations that defined *kamay* as ‘animation’, as the ability to change or transform, “to charge with being, to infuse with species power” (Salomon, Urioste, & de Avila, 1991, p. 16). Acuto has argued that these elements reflect an often-neglected symbolic component of Inka domination, relating to ritual, traditions, landscapes, ancestors, and nature (Acuto, 2005). The *guaca kamayoq* played a key role in this context, as they pulled together the contradictions and connections in the cultural reproduction of the Inka state. As guardians of temples, shrines, or revered artefacts, they helped to re-produce a form of regional social order cobbled together according to a tradition of powerful places (Kosiba, 2011). *Guaca kamayoq* were skilled in the art of channelling and animating the superhuman elements of the *guacas* – sacred places, people, or objects that were revered for their “advantage to the common” (de la Vega, 1609, p. 77) (see **Figure 14**). They also performed roles as priests and oracles, thereby reproducing *animation* as a fundamental concept in the socio-cultural,

spiritual, and philosophical reproduction of the Inka state (Lane, 2011). These mythological components were fundamental to politics in the capital of Cusco, as Inka nobility spoke through and formed alliances with the network of oracles. In addition to the *guaca kamayoq*, for example, there were *poñoy kamayoq* (Figure 15), who were glossed as ‘sleepyheads’, but perhaps more accurately described as “professional dreamers, whose task it was to divine the best course of action for the future by looking into dreams” (Howard, 2002, p. 29) – a task related to that of the oracles. Howard subsequently argued that *kamay* reflects an initial state of affairs in the sense of continual animation, which is communicated through the channels of sleeping, dreaming, and hallucinating, and which ultimately culminates in *yachay* – knowledge.

The processes of production that the Inka sought to control were also fundamentally tied to the notion of animation, particularly through the *yacana*. This llama-shaped constellation of stars was believed to be a *camaquin* (animator) of llamas, as it moved “through the middle of the sky”, before descending upon earth to “infuse a powerful generative essence of llama vitality, which causes earthly llamas to flourish” (Salomon et al., 1991, p. 16). The *yacana* was a central component of a ritualized, symbolic display of livestock vitality (whereby llamas and alpacas were run up sacred snow-capped mountains), which was overseen by the celestial-reading *yanca kamayoq* and which determined selective breeding practices (I return to the significance of this form of cultural reproduction in chapter seven).

As animators in the above senses, *kamayoc* have also be linked to the shamans, who channelled forces of nature. Guaman Poma (2009, p. 147) identified the *hampi camayoc* as herbalist surgeons or herb masters, and the more specific *wicsa allichac hampi camayoc* as stomach curer medical specialists or stomach healer herb masters. These titles – derived from the verb *hampiy*, to heal – have also been transliterated as the chief stewards of hospitals (Miguel Glave, 2008, p. 394), but their link to natural medicines indicates a deeper relation to the culture of healing and herbalism that underpinned Andean culture during Inkan occupation. Indeed, Rowe (1946) argued that these healing *kamayoc* were in fact the same priestly *guaca kamayoq*, who also acted as healers and therefore occasionally went by their additional titles.

These socio-mythological roles of the *kamayoc* cemented their cultural position in Andean society, serving simultaneously to reproduce both the pre-existing forms of socio-

cultural reproduction and the symbolic components of Inka domination. The network of *kamayoq* was enrolled in the co-constituted nature of the Inka political economy, as it internalized tensions between centralized control and regional production; between domination and voluntary incorporation; between reciprocity and market-like exchange; and between technical innovation and mythological determinism. The *kamayoq* were central to the period of Inka state consolidation described by Covey (2006). They helped pull together the contradictions and complementarities that characterized the diverse governance and production functions of the centrally organized, yet regionally and locally differentiated Inka political economy – a pattern that would have lasting effects on future landscapes of imperial conquest and administration (as well as on future landscapes of *kamayoq* in practice) (Bauer & Covey, 2002; Covey, 2006). As the following section elaborates, the *kamayoq* provided a kind of institutional consistency that held together different forms of economic integration during the various transitions between different modes of political economic organization in the Andes.

Shifting positions: from communitarian origins to delegated stewardship

The purpose of beginning the trans-conquest analysis with the Inka period was to dispel any romantic notions that the pre-Hispanic form of the *kamayoq* might somehow be anti-colonial. Despite contemporary allusions – by the likes of Soluciones Prácticas – to culturally appropriate, pre-Hispanic forms of knowledge that the *kamayoq* disseminate, they did not simply operate autonomously to govern production at the scale of the *ayllu*. At various times over the past centuries they have also benefited from and operated within or for colonial processes of state building and governing political-economic change. However, given the evidence that I present below, and following Rostworowski's (1999) elaboration of Inka techniques of building on the technical and organizational capacity of pre-existing societies, it is unlikely that the colonial Inka state established the *kamayoq* system. Rather, the Inka likely strengthened, institutionalized, and exploited the *kamayoq* within their hierarchical systems of regional governance, in the process creating a degree of institutional consistency in managing regional diversity and the shift towards an integrated political economy that combined reciprocity and redistribution at the core with exchange at its geographical fringes. In this

section, therefore, I explore the ways in which the *kamayoq* have been incorporated into different forms of governing production and shaping patterns of economic integration. The point here is not to provide a comprehensive account of the *kamayoq* under either pre-Inka or Hispanic production systems – for which there is little documented evidence. Rather, the point is to illustrate the adaptive nature of the *kamayoq* as an institution: while a core set of practices is identifiable across different eras, their articulation has shifted.

Etymological and archaeological evidence supports the suggestion that the *kamayoq* pre-date Inka control of the Andes. It is possible, for example, to extend Cerrón-Palomino's (2012) point about the etymology of term *tukuyrikoq*. Under the Inka, *tukuyrikoq* were Royal officials, governors, magistrates, or inspectors (Betanzos, 1996; Canziani, 2012; Guaman Poma De Ayala, 1615/1616), but Cerrón-Palomino argued that the term has Aymara or Puquina origins, given its etymological form.⁶¹ Similar etymological insights suggest that the divergence between the two most commonly used forms of *kamayoq* and *camayoc* (and their respective variants) might indicate confusion between its relatively obscure Aymara – or perhaps Puquina – heritage, and its subsequent *quechuización* (transmogrification into Quechua) during the latter stages of the Inka occupation. Combining such insights with the fact that the Inka commonly based much of what they wrought on appropriations and adaptations of pre-existing social formations raises the question of how the *kamayoq* were previously organized.

Kevin Lane (2010) has argued that complex non-state, community-managed societies of hydraulic agro-pastoralism existed in the Andes before Inka colonization (particularly in the Killke period (1000-1400), but perhaps even dating to the beginning of the Wari period in AD 600). Within these societies (organized around the *ayllu*), a group was selected from within the community, on either a hereditary or temporal basis, to oversee access to water and necessary work within the hydraulic system (in a way similar to the *unu kamayoq* – a link explicitly made by Lane). Lane (2009) has also illustrated the links between these technically advanced forms of water management and the role of specialist camelid farmers (akin to the Inka *weša*

⁶¹ Puquina was the dominant language of what is now the Southern Andes of Peru prior to the dispersion of Aymara. For the first half of Inka rule, Aymara was the official language, before Tupac Inca Yupanqui – the tenth Inka ruler (of nineteen) – imposed Quechua as the official language (Cerrón-Palomino, 2004; Guaman Poma De Ayala, 1615/1616).

kamayoq), who exercised power over mixed farming communities by adopting concomitant specialization and intensification of the pastoralist economy. In combination, the water experts and camelid farmers built and maintained large and intricate hydraulic systems to provide pasture and water in an otherwise water-scarce environment.

For Kosiba (2011, p. 140), these management practices stress the fact that “a regional sociopolitical framework might have been the unintended outcome of highly localized political practices designed to affirm local ties between people and places”. Rather than being a chaotic social landscape, Kosiba suggested that pre-Inka forms of social organization often revolved around regionally shared frameworks of political norms. Thus *kamayoq* may have functioned within regional, local, or community-based systems of selecting or appointing ‘officials’ to certain management positions at the community scale – a process that suggests the existence of locally tailored political norms and frameworks that revolved around these specialists. The arrival of the Inka did not signal an end to such forms of organization; as Covey (2006) has pointed out, the long-term strategy of Inka state formation built on centuries of Andean social organization and did not simply borrow from the preceding period of Wari hegemony. The Inka incorporated the self-organized system of establishing expertise into their expansion strategy, building a network of community-based experts across multiple sectors – a form of regional connection that Covey has argued the Wari were unable to achieve. In the process, *kamayoq* were afforded increased power, since their position shifted from temporary, rotational custodians to permanent experts with a degree of privilege (they were exempt from labour tax (Rowe, 1946)). In the initial phases of Hispanic colonialism, too, the *kamayoq* maintained their privileged status, until indigenous elites were homogenized under the single banner of *kuraka* or *cacique*.

There were therefore periods of re-institutionalizing the *kamayoq* in different ways: just as the Inka incorporated existing *kamayoq* functions into their techniques for governing the diverse regional political-economy, so the Spanish appropriated and manipulated existing social formations in order to serve their own needs. The notion of *kamay*, however, was subject to political, social, and cultural colonization according to four elements of structural change initiated by Spanish colonization. First, the ‘plunder economy’ consisted of the imposition of European exchange values, the plundering of stores of staple and wealth finance (such as *guacas* and *qollqas*), and the undermining of Inka spaces of productive symbolic

value (e.g. through the mass slaughter of alpacas) (de Albornoz, 1967; de Cieza de León, 2005; Kosiba, 2012; Spalding, 1999). Second, the Spanish strategically undermined the Inka power base by dismantling the majority of existing institutional structures while adapting others to suit their needs (Rostworowski & Morris, 1999). Third, the introduction of the money form undermined the use value of items placed into reciprocal circulation (such as silver cups produced through the combined labour of *qolqi* and *qiro kamayoq*) and displaced wealth items such as the *q'umpi*. Finally, the shift from a labour tribute tax to a direct head tax contributed to the creation of an alienated labour pool, particularly when combined with the *reducciones* ('reductions') – the forced relocation of scattered Andean populations into governable towns. Importantly, the first round of *reducciones* introduced by the Spanish viceroy, Francisco de Toledo between 1570 and 1575 directly led to the establishment of the municipalities of Checca, Langui, and Layo – areas in which I conducted my research, and which are explored in a contemporary setting in the remainder of the thesis (see Gade and Escobar (1982) for a more detailed account of how the *reducciones* redefined settlement patterns in the regions of Canas and Canchis in Cusco).

These structural shifts combined to transform the *kamayoq* as an institution, as it increasingly contributed to the colonial-Andean hybrid landscape according to Spanish colonial notions of property and production. This colonial-Andean hybrid landscape emerged from a reliance on existing patterns of labour control and land-use organization according to the *ayllu*, despite the *encomienda* system (which granted indigenous communities to Spanish lords) having been designed to replicate European images of hereditary authority and the *reducciones* designed to overhaul and entrench colonial governance (Spalding, 1999; Wernke, 2007). Guaman Poma (1615/1616, p. 659), for example, depicted the gendered system of labour exploitation (discussed above) to have continued under the Spanish, as “wrathful, arrogant Dominicans force native women to weave for them” (Figure 13). Archives reveal, however, that *guaca kamayoq* transmogrified into caretakers of *haciendas*, and skilled commodity producers – while still overseen by indigenous *kuraka* – were increasingly used as wage labourers to produce commodities for insertion into the rapidly developing market exchange networks (de Albornoz, 1967; Unknown, 1792). Meanwhile, the increase in circulation and accumulation of coined silver required increased production in the mines, and led to the *entradas* (expeditions of exploration and conquest), which cemented agricultural de-

intensification thereby undermining agricultural *kamayoq* and emphasizing their labour in mines (Gade & Escobar, 1982; Wernke, 2010). This increasingly alienated labour pool fed into an emerging class distinction between the wage labour of the productive realms (e.g. the *kamayoq* who now worked in the mines) and the slave labour used to maintain the households and *haciendas* of the *encomenderos* (the guardians referred to by de Albornoz as *guaca camayos*).

There was a shift, therefore, in the ways in which the *kamayoq* were contributing to patterns of integration. As experts within pre-Inka, regionally connected communities of production, and as managers and accountants for the Inka strategy of accumulating and redistributing staple and wealth goods, the *kamayoq* underpinned redistributive and reciprocal modes of integration at various scales (including the supra-household and *ayllu*), and according to positions of relative influence and privilege. With Spanish colonization, the *kamayoq* began to facilitate the shift to regularized forms of monetary exchange as the main means of economic integration. By mid-18th century, the presence of *kamayoq* in colonial records such as the *visitas* had literally been erased, as the Spanish had created a new bureaucratic network of indigenous cadres known as *caciques* (a term used interchangeably with *kurakas* in the Spanish *visitas*) (de Laveta, 1714; Ortíz de Zúñiga, 1967; Unknown, 1606, 1715, 1792).

Conclusion: re-inscribing *kamay*, re-framing ethnodevelopment

In this chapter, I identified the dangers of approaching Andean social practices and cultural institutions without conducting a historical analysis to uncover long-term shifts in meaning and practice. I countered this a-historicism, associated with the instrumental re-inscription of indigenous social practices and institutions, by establishing a framework for analysis that built a Polanyian perspective to political-economic integration. This analytic revealed the institutional role of the *kamayoq* in integrating regionalized production systems across both space and time. The historical analysis illustrated how the diverse knowledges and practices of the *kamayoq* have been put to work as part of the rational means of development, both historically (such as under the technical remit of Inka regionalized production) and today, in

terms how contemporary re-appropriations of indigenous social practices often ignore the conflicting institutional histories within which they are embedded.

Where, however, does this leave an analysis of the contemporary form and function of the *kamayoq*? In beginning to tell the contemporary story of the *kamayoq*, the historical analysis presented in this chapter acts as more than a backdrop; it serves to re-frame the notion of ethnodevelopment. The historical analysis revealed that notions of indigenous knowledge are neither static nor internally coherent; variations exist and at times indigenous practical knowledge has been put to work according to broader structural conditions. At various points throughout the thesis, I will also return to the three interpretations and incarnations of the *kamayoq*: as officers in structures of governance, as production experts, and as agents of socio-cultural reproduction. Throughout, I maintain the Polanyian notion of integrated economies as a way of explaining the form and function of the *kamayoq* within contemporary ethnodevelopment paradigms; the notion is useful for uncovering the variable role that *kamayoq* play in upholding a particular, contextual mix of the four components of economic integration: reciprocity, redistribution, (market) exchange, and householding.

In the remainder of the dissertation, I focus on the contemporary revival of the *kamayoq*. To complete the picture of political-economic integration, chapter four charts the structural conditions that facilitated the re-emergence of the *kamayoq* phenomenon. Chapters five and six then address the implications of this revival in terms of, respectively, the phenomenon's re-insertion into state governance structures and the current role of the *kamayoq* in supporting alternative forms of integration (i.e. reciprocity, redistribution, and householding).

FOUR

RE-CONSTRUCTING KAMAY:

THE UNEVEN POLITICS OF PUTTING ‘ETHNIC EXPERTISE’ TO WORK

In this chapter, I present the revival of the *kamayoyq*, locating the phenomenon within contemporary trends of development such as the participatory turn and ‘farmer first’.⁶² I also locate the *kamayoyq* within ethnodevelopment programmes, identifying the creation of ‘ethnic expertise’ and positioning the *kamayoyq* as ethnic experts within debates around the functioning of Andean households. Empirically, this chapter takes an account of the *kamayoyq* up until approximately 2010, when the government institute IPEBA introduced its pilot studies of certification – a programme that I explore in detail in chapter five.

While instrumental and technical accounts of the *kamayoyq* have emanated from development NGOs such as Soluciones Prácticas, here I provide a much-needed political-economic and socio-cultural critique of the contemporary function of the *kamayoyq*. This critique explores how a politics of knowledge in the Andes is tied to the uneven effects of the ethnodevelopment constellation in practice. I explain how putting the *kamayoyq* to work within ethnodevelopment programmes has prompted a significant shift in the meaning of *kamay* and the practices of the *kamayoyq*: the dynamic form of knowledge embodied in *aprender hacer* is being replaced by a static form of knowledge-on-display (*saber hacer*). This shift has implications for the social and political positions of the *kamayoyq*: as their traditional position of a respected community member is being eroded, so their political role as leaders is emphasized – and yet not substantively supported – by development NGOs.

⁶² An edited version of this chapter has been submitted to *Environment and Planning A* as part of a special issue that emerged from the Cornell University Summer Institute on Contested Global Landscapes (May 2014).

This chapter therefore begins the contemporary interrogation of what it means – if anything – for the *kamayoq* to carry the label of being ‘culturally appropriate’. “The idea about the *kamayoq*”, Carlos de la Torre explained to me as we sat in the courtyard of Soluciones Prácticas’ old offices in the wealthy Lima neighbourhood of Miraflores, “is that some farmers who have above average knowledge, they are trained to become independent, like a consultant, to give technical assistance to other farmers and to be paid by these farmers” (de la Torre, interview, July 2011). Having worked with the *kamayoq* for over three decades, Carlos de la Torre was described by one *kamayoq* as the “godfather of the *Kamayoq* School” he had helped establish. Carlos literally wrote the (only) book on the *kamayoq*, placing the horizontal *campesino-a-campesino* model of development into the context of institutional investments in agriculture and rural development in the Sierra Sur (see: de la Torre Postigo, 2004). However, his account only told part of the story – both in a temporal sense of covering *kamayoq*-related programmes up to the turn of the millennium, and in an institutional and analytical sense, given the book’s intended readership among development practitioners. To complement and update Carlos de la Torre’s contribution, here I develop a broader and deeper socio-cultural and political economic analysis of the *kamayoq* today. The interview with Carlos in 2011 not only revealed his own evolving perspective, but also hinted at the need for such an analysis, as he brought together the notion of contextual knowledge with neoliberal ideas of consultant *campesinos* providing technical assistance to remote communities.

In this chapter and the next, therefore, I focus on the role of the *kamayoq* as what Carlos de la Torre described as “transcultural bridges” within the “culturally appropriate” model of *campesino-a-campesino* ‘technical extension’ (interview, July 2011; 2004, p. 28). That is, I focus on the contemporary re-institutionalization of the *kamayoq* as ‘ethnic experts’ operating within transnational knowledge networks of ethnodevelopment paradigms, and tasked in increasingly professionalized ways to deliver services to remote Andean communities. (In chapter five, I further build on this analytical lens by exploring the transformation of the *kamayoq* from ethnic experts to ethnic entrepreneurs.)

As I explained in chapter three, the re-institutionalized form of *kamayoq* can be placed alongside other re-popularized Andean concepts and institutions, such as the *ayllu* and *ayni*. Although these historic concepts have been held up uncritically as empowering examples of pre-Hispanic institutions that can help produce a form of “development-with-identity”

(Andolina et al., 2009, p. 53), they are increasingly being implicated as a means “to cloak postcolonial development as usual” (Radcliffe, 2012, p. 248). Similarly, the suggestion that the revival of the *kamayoq* brings a degree of cultural ‘legitimacy’ to contemporary ethnodevelopment paradigms, simply by virtue of their pre-Hispanic origins, risks silencing the historical discourses through which the *kamayoq* operate. The previous chapter established that the historic position of the *kamayoq* was not singular or internally coherent; their complex and contradictory history points to both community-based forms of reciprocal labour in pre-Inka and Inka societies, and integration within Inka and Spanish colonial governance structures.

My point is that contemporary *kamayoq* – as a historically constituted phenomenon – cannot be mapped neatly onto the terrain of ethnodevelopment. I explore how the post-colonial tension harboured within ethnodevelopment paradigms is embodied in the phenomenon of the *kamayoq*, in the process revealing that celebratory claims of cultural appropriateness render invisible the phenomenon’s internal incoherence and contradictions. As agents of both technical extension *and* cultural reproduction, *kamayoq* have the potential to uphold and strengthen Andean ideals of collective life and communal resources. However, they simultaneously integrate Andean resources and livelihoods into broader systems of governance and the market economy. The way in which this tension unfolds creates a particular, uneven topography of developmental and cultural effects, which have often been left invisible within broader claims to cultural legitimacy and horizontality. These effects emerge not just because of new development programmes associated with NGOs, but also as a historic product of shifts in Andean community relations and forms of socio-economic organization and integration. In this chapter I focus on how *kamayoq* fit within the networks of transnational development institutions but simultaneously function according to the rules of community organization in the Andes. In the next chapter, I address the implications of programmes of professionalization, which formalize the notion of “ethnic expertise” within the *kamayoq* phenomenon, instigating a shift towards ethnic entrepreneurship.

Franchising the *technique* of participatory development

The 1980s ushered in a wave of critiques that were aimed at technology-focussed development, and were influenced by post-modern arguments for greater attention to plurality and difference. Emphasis was placed on developing “bottom-up” approaches to development, on turning the development model on its head to put the last first, as well as the first last (Chambers, 1983, 1997). Yet within this ‘participatory turn’, attempts to develop more bottom-up, participatory approaches to the *instruments* of development did little to alter the prevailing paradigm, arguably deepening the shift towards means over ends as RRA quickly gave way to PRA, which in turn has more recently made way for PLA (Chambers, 1983, 1997, 2007a).⁶³ This body of work incorporated a heavy methods-oriented approach to manufacturing the most representative conduct of development as possible. Criticisms of these approaches have become fairly common-place since the publication of Cooke and Kothari’s (2001) *Participation: The New Tyranny?* – a collection of stinging critiques of instrumental approaches, unheeded power relations, patronage, and collusion with elites, which all point to the subversion of participatory methodologies (see Mosse (2005) for a particularly enlightening and grounded critique). To borrow Maia Green’s (2003) terminology, however, participatory approaches have become enrolled in a process of merely franchising policy across diverse sectors. Two examples of institutionalized forms of such franchising are participatory ‘technical assistance’ and participatory budgeting, which I expand upon here before exploring empirically through the case of the *kamayoq*.

In their critical appraisal of post-war technical assistance (TA) programmes, Walker et al. (2008) made a distinction between the ‘hard’ programmes of the 1960s-70s and the ‘soft’ programmes that emerged in the 1980s through neoliberalization and the increasingly ubiquitous role of (I)NGOs in development. The former focussed on short-term projects of agricultural or infrastructural development, revolving around expert-driven large-scale, capital-intensive projects, such as water supply for irrigation or dam construction. By contrast, ‘soft’ approaches to TA have channelled expert services into developing institutional capacity

⁶³ I let these acronyms stand on their own, as they reflect the very nature of *technique*. However, they stand for Rapid Rural Appraisal, Participatory Rural Appraisal, and Participatory Learning and Action, respectively.

and human capital through training programmes. The wide adoption of these “softer” programmes “marks a turn toward the cultivation of certain types of subjects” (Walker et al., 2008, p. 530), as the concept of human capital became caught in a web of related terms, such as social capital, capacity, and capacity development. “Capacity building” emerged as short hand for expert-led seminars and workshops, thereby maintaining a political-economic *status quo* that reinforced established privilege (particularly in the form of external consultants) (Walker et al., 2008).

This technocratic, tool-kit approach has depoliticized development, compounding a-theoretical approaches that valorize particular technical skills, reinforce categorical differences, re-produce neo-colonial forms of authority, and entrench a form of cultural imperialism associated with professional experts wielding their expertise (Kothari, 2005). Transnational NGOs are directly implicated in this critique, as they structure development pathways and re-work places according to the neo-colonial gaze of external experts (Bebbington, 2004; Bebbington & Kothari, 2006; Roberts, Jones III, & Fröhling, 2005; Yates, 2012). The net effect is that alternative approaches and potentially progressive concepts such as ‘ownership’, ‘partnership’, ‘stakeholder engagement’, and ‘collaboration’ have become increasingly implicated – along with ‘participation’ and ‘empowerment’ – as programmes of conduct that entrench neo-colonial governmentality as the *modus operandi* of development (Kothari, 2005; Walker et al., 2008). In the resulting social spaces of governmentality, generalized forms of entrepreneurial conduct are used to re-produce pedagogically-ready entrepreneurial subjects, thereby fitting civil society into a neoliberal mould – an issue I explore explicitly in the following chapter.

A similar critique could be levelled at the ways in which the kinds of technical (and agricultural) extension alluded to by Carlos de la Torre and explored in this chapter have evolved over the past decades. Coello (2006b), for example, revealed the technocratic means and ends of agricultural extension techniques in the Peruvian Andes, as well as how they complement broader trends of economic de-regulation and entrepreneurialism. These programmes could therefore be read as a form of development ‘*technique*’, a term derived from Jacques Ellul’s critique of how society had been subsumed within a gigantic

technological bluff (Ellul, 1964, 1990).⁶⁴ For Ellul, *technique* referred to a “totality of methods *rationaly* arrived at and having *absolute efficiency* (for a given stage of development) in *every* field of human activity” (Ellul, 1964, p. xxv). “Technique”, he argued, “clarifies, arranges, and rationalizes...It is efficient and brings efficiency to everything...At present there is no counter-balance to technique” (Ellul, 1964, pp. 5, 301).

Yet in exploring the question of how humans began to see and understand the world through a network of socio-material relations that embody the core character of *technique*, Ellul’s framework was overtly Eurocentric and anthropocentric as European forms of technical knowledge (which he charted from their origins in Greece by making comparisons to non-European forms in places like China) began to envelop social systems. *Technique* therefore takes on the character of a Eurocentric prophetic grand theory, or “panorama”, unable to tackle the gritty, practical, and *diverse* politics of daily life (Latour, 2005, p. 189). My aim is neither to reproduce this panorama with all of its limitations, nor to deploy the notion of *technique* in an attempt to say something new about the entirety of development (cf. Gidwani, 2008).⁶⁵ Rather, I provide a particular window into critical development studies by illustrating how *technique* has filtered into this field, in the process highlighting how contemporary processes of focussing on ‘development-with-identity’ reflect a form of ‘ethnodevelopment *technique*’ that simply internalizes indigenous cultures within existing equations of efficiency, calculability, rationality, and so on. I introduce the notion of *technique* here in order to frame the contemporary insertion of the *kamayoq* into development

⁶⁴ I have italicized *technique* to indicate my use of the French term. Unfortunately, English translations of Ellul’s work do not help our task of making sense of his distinctions between *technique* and *technologie*, since ‘technology’ has taken on two interpretations in English: the study of technics; and the artefactual-material outcome of technics (i.e. a piece of technology, such as a computer), which must be considered a part of *technique*. The English translation of Ellul’s defining work on *technique*, *La Technique*, was given the title *The Technological Society*, which can be misleading given the divergence between English and French terminology. Perhaps more accurate might have been ‘the technical society’, for it is not a society of machines, but a society of efficient technical means and techniques that is of principle concern in Ellul’s work.

⁶⁵ Critiques of Ellul’s approach have pointed to, for example: his nostalgia for a pre-*technique* era, which revealed a tendency to idolize and/or romanticize the past (Marty, 1981); paying too little attention to the positive side of *technique* and technology (Feenberg, 2002, 2004); the robbing of human and nonhuman agency in their ability to democratize *technique*; his misconstrued understanding of political power (Stanley, 1981); and his poorly defined yet ambitious conceptualization of efficiency (Son, 2013).

programmes focussed on the *means* of agricultural extension. In this chapter and the next, I explore how this process has unfolded, first via a network of development NGOs and second according to a new state-managed project of normalizing the work of the *kamayoq* within national frameworks.

The core character of Ellul's notion of *technique* has appeared explicitly and implicitly in scholarship on development through the notions of process, efficiency, calculability, planning, expertise, the question of technocracy, and rationality.⁶⁶ These components have underpinned some seminal contributions, including James C Scott's (1999) depiction of the governmental state as an embodiment of norms, rules, and technical knowledge, Arturo Escobar's (1995, p. 99) conception of the 'enframing' machine of development as a "worldwide axiomatic" that determines visibilities and development subjects, and James Ferguson's (1994) exposition of the instrumental and anti-political machine of development, which deploys instruments in the exercise of power over populations, often with unknowable and unintended consequences.

More recently, Vinay Gidwani drew upon Deleuze and Guattari to insist that the development machine is not a metaphor (as Escobar implied), but is diagrammatic: "it is an abstract machine that reorganizes the conditions – or ecology – of human life for its betterment" (Gidwani, 2008, p. 70). This diagrammatic, abstract machine actively constructs future reality in diverse ways; it is performatively different-in-itself according to the ways in which desires for improvement are translated into reality (Gidwani, 2008). Similarly for David Mosse (2005), it is not the machine itself that is necessarily the problem, but rather the process and means by which it operates. Tania Li (2007) also focussed explicitly on process, using the notion of 'rendering technical' to depict the fact that development programmes increasingly need to frame problems in terms that are amenable to technical solutions, thereby conflating developmental ends within means, and de-politicizing the entire process. Rendering technical, she argued, confirms expertise by entrenching the relative positions of programme trustees with the capacity to diagnose deficiencies in others, and programme 'beneficiaries' who are subject to expert direction (T. M. Li, 2007).

⁶⁶ While Ellul (1964, pp. 78-79) provided his own seven core characteristics of *technique* (rationality; artificiality; technical automatism; self-augmentation; monism; universalism; and, autonomy), the characteristics I list are those that are both central to Ellul's work and used as framing devices in development scholarship.

This ‘technical matrix’ of development experts is a black box that obscures particular kinds of knowledge within it, while it excludes external others; but, it is not a closed, self-referencing system outside of or immune from politics (Mosse, 2005). Part of Li’s task was to put the political back into the equation of technical approaches to development, thereby mirroring Timothy Mitchell’s (2002) use of the term “techno-politics” to point to the interwoven nature of politics and technique. Mitchell revealed the very politicization of technical interventions, and according to Davis Mosse he insisted – in a reversal of Gidwani’s performative machine – that “policy does not precede and order practice, but is produced by it” (Mosse, 2005, p. 246). In Mitchell’s account, the development machine in Egypt attempted to immortalise its own diagram in the discourse of the peasant, a particular Egyptian vernacular, and in a model village of ‘appropriate technology’ that became a crumbling tourist attraction. There is, then, a degree of permanence in the contested and compromised outcomes of a heavily means-focused development. Yet permanences such as the Aswan dam in Egypt emerge in concert with other lively materialities, such as “blood-borne parasites, synthetic chemicals, mechanized war, and man-made famine” (T. Mitchell, 2002, p. 22) – all of which fundamentally re-shaped Egypt’s future.⁶⁷

These accounts point to a politicized process of development *technique* – to a political project of focussing on the means of development, and of developing those means according to prevailing (often Western, modernist) understandings of knowledge and progress. The *campesino-a-campesino* model of agricultural or technical extension – into which the *kamayoq* have been inserted in recent decades – could therefore be read in these terms. Writing in the context of PRATEC’s work on reviving Andean forms of agricultural knowledge, Marglin has shown that a rupture between the disembodied forms of *epistemē* (universalized knowledge) associated with external experts and the *technē* (grounded and contextual practical knowledge) of local practitioners has served to undermine the institutions

⁶⁷ These material outcomes and expressions have stimulated interest among geographers who have focussed on the techno-politics of infrastructure, or on what Swyngedouw (2007) has called “technonatural assemblages” (fusions of nature and technology under particular social networks of power). In more explicit Ellulian readings, Agbemabiese and Byrne (2005) explored the autonomy of *technique* in relation to the Volta River in Ghana, and Karen Bakker (2010b) argued that the socio-political workings of *technique* have been “hard-wired” into Jakarta’s hydraulic network. My focus, however, is on *technique* as a process, and its affects of knowledge production and dissemination, as well as on the agents involved in the process.

that have helped support agriculture as a way of life in the region for centuries. The agricultural expert who operates within networks of technical agricultural extension draws on both *technē* and *epistemē*, but is constrained to the language of the latter:

The expert recognises the *technē* of the farmer, in which *itk* [indigenous technical knowledge] is largely couched, and is happy to learn from the farmer. In return, the expert is more than willing to teach the farmer, to give back an epistemic reworking that he [sic] has elaborated on the basis of the farmer's *technē*. But this is exactly where the trouble begins. The expert can give back only what he can translate from the farmer's *technē* into his own *epistemē*... It is a systemic problem, a problem of the knowledge system. For an expert to move from farm to farm, not to mention from district to district, or country to country, he must disembed, categorize, reduce, universalize. He must, in short, epistemize... The problem is compounded not only by ideology, but also by the power of the experts... Perhaps there is no solution (Marglin, 1996, pp. 239-240).

Such critiques, however, risk paying insufficient attention to the relational components of education and knowledge exchange. Walker et al.'s critique of technical assistance as neoliberal governmentality, for example, does not attend to how the specific principles, strategies, and practices of neoliberalism work through TA. Their focus on intermediary NGOs and community foundations does not fully explore the networked connections of technical assistance to which Bebbington and Kothari (2006) allude. These critiques can obscure the agency of local actors – whether conceived as experts or not. In this chapter I attend to this gap by extending analysis beyond the NGO and exploring how the ‘experts’ in TA are increasingly local actors, albeit enrolled into the transnational development networks of NGOs. I explore the channels through which knowledge flows by focusing on the *agents of extension* and their practices, rather than simply on intermediary NGOs as administrators of assistance. It is not just intermediary NGOs reaching far flung places on behalf of donors, but *kamayoq* reaching far flung *subjects* on behalf of NGOs. I therefore ask if and how indigenous, historically constituted, and “culturally appropriate” practices such as those of the *kamayoq*, are being enrolled as the co-creators of spaces of governmentality.

The second example of development policy franchising – participatory budgeting – evolved as an attempt to create space for local actors who were marginalized through the above programmes of conduct. Yet despite emanating from progressive experiments in deliberative decision-making in Brazil (see: Baiocchi, 2005; Gret & Sintomer, 2005; Pires & Motta, 2006), participatory budgets have been co-opted by elites and transformed into an

instrumental tool for entrenching the status quo – a trend I explore empirically in this chapter. Consequently, the *means* of participation now simultaneously justifies and obscures the already-existing *ends* entrenched in the final budget. Participatory budgets can therefore be seen as part of the transnational mutation of fast policy responses, characterized by “technocratic forms of program evaluation and development, dense expert networks, and orchestrated communities of practice, within which a range of policy intermediaries – particularly those connected with multilateral agencies – are assuming significant new roles” (Peck & Theodore, 2010b).

However, these institutionalized forms of participation do not mutate by themselves; they do so according to a network of competing actors. Mosse (2005) explored these networks by focussing on expert development consultants whose practices erode the very models they work to reinstate; it is particular interpretations – rather than the projects themselves – that fail. His narrative weaves together a critique of policy and programme development, maintenance, and re-inscription by unpacking elements such as strategic representations, institutional procedures, local interests and external agendas, administrative systems, rules of administrative order, expertise, consultancy, organizational routines, and interpretive communities. Rather than suffering from poorly defined or misconceived objectives, these project systems themselves are the problem, as they are unable to work against existing patterns of power and obscure the autonomous generation of meaning. All of these components characterise the constricting effect of development’s chain of organization, not because power flows in one direction (from multi-lateral donors ‘up there’ to local people ‘down here’), but because power is diffuse and capable of both co-opting and re-aligning development *means* from all angles: “ideas of participation may serve ‘top-down’ interests such as legitimation or efficiency...but they also have enormous potential to enfranchise perspectives from below, or to offer the potential for inclusion, empowerment, or leverage” (Mosse, 2005, p. 239). To overcome the polemic of participation as tyranny, Mosse concluded that we need a better understanding of the polyvalent nature of power and participation, recognizing that heterogeneous aspirations are put to work politically through the networks of competing actors.

Participation, inclusion, and empowerment in decision-making all seem to have been swallowed up within the means-focussed nature of development as *technique*, operating as

part of the technics of governmentality as much as a radical way of re-envisaging development. I address to the effects that this ‘technics of governmentality’ has on the very agents involved in the process: not on the government agencies, NGOs, or external experts, but on the local people increasingly responsible (often unwittingly) for keeping these technical elements turning.

Positioning *kamayoq* I: agricultural innovation systems and the politics of knowledge in Peru

The narrative of the *kamayoq* and their position within the *campesino-a-campesino* model fits within the above context: developed as a bottom-up, or at least horizontal, way of improving agricultural techniques and technologies, the *kamayoq* reflect the insertion of participatory approaches within the broader governmentality of development *technique*. Before exploring the contemporary case of the *kamayoq*, therefore, it is worth briefly contextualizing the rationale behind this *campesino-a-campesino* model.

In conjunction with the ‘participatory turn’ outlined in the previous section, a body of work emerged that signalled a shift not just in how rural populations were consulted (i.e. from RRA to PRA), but in how these populations were deemed ‘capable’ of determining their own futures. Paternalistic development prescriptions gave way to a ‘farmer first’ approach that not only grounded the idea of agricultural and productive improvements in the reality of farmers’ everyday lives, but even empowered these farmers to develop their own solutions to their own contextual problems. This shift prompted the conference “Farmers and Agricultural Research: Complementary Methods” to be held at the Institute of Development Studies (IDS, University of Sussex, UK), the results of which emerged in the publication of a collection of largely instrumentalist takes on the issue of farmer first (Chambers et al., 1989). Part of the point of was to continue the critique that Fritz Schumacher had made more than fifteen years previously: the top-down transfer of technologies is incapable of addressing the diverse reality of rural populations across the globe. As Robert Chambers (1994, p. xiii) summed up in the foreword to a follow-up publication:

The Farmer First book argues that the approaches and methods of transfer of technology, which have served industrial and green revolution agriculture, do not fit the resource-poor farming of the third, complex, diverse and risk-prone agriculture. It [the book]

contrasts...traditional, technology driven agriculture, with its standardizing package of practices, with the complementary farmer-first approach or paradigm, which generates basket of choices to enable farmers to vary, complicate and diversify their farming systems. It stresses, illustrates and explores the abilities of resource-poor farmers to experiment, adapt and innovate; the importance of giving priority to farmers' agendas and knowledge; a range of practical approaches and methods for farmer participation in research; and the implications for outsiders' roles and for institutions.

Five years later, Ian Scoones and John Thompson pushed a critical wedge into the issue. In *Beyond Farmer First* they presented a series of essays on the issue that flirted with instrumental and critical perspectives. The collection re-emphasized knowledge diversity, unequal power relations, and the complicity of development institutions in the neo-colonial relation of knowledge imposition and dependency. While that collection marked the beginning of a period of introspection and reflexivity in rural development studies, development-in-practice continued to build on the farmer first paradigm, and yet it often did so by treating the issue as a technical problem of finding the right balance between public and private funding and delivery (McLeod Rivera & Qamar, 2003). Twenty years after the first conference, therefore, Ian Scoones and John Thompson reconvened development scholars and practitioners to reflect on this intellectual and practical movement. The resulting collection of contributions – *Beyond Farmer First* – drew on a range of experiences to stress the importance of looking beyond ‘the farm’ to think in terms of broader innovation systems, including market interactions and the institutional and policy environment (Scoones & Thompson, 2009). A key critical thread emerged around the ways in which a politics of knowledge forces us to reconsider conventional and often binary distinctions of knowledge (such as indigenous and scientific, traditional and modern, local and global, practical and theoretical), and focus on more integrated, hybrid forms of contested and situated knowledges continuously in the making.

During the first decade of the 21st century, then, the notion of farmer participation in technology development was exposed to the same kind of critiques that had previously been levelled at top-down technology transfer programmes. For example, in simultaneously depicting the evolving situation of policy-making around a rural development project in India and developing a critique of the ‘designer problems’ established by approaches such as

participatory technology development (PTD), David Mosse almost mocked Robert Chambers' commitment to the principle of farmer first:

Improved technology would overcome a cycle of inefficient resources use and low production, but it would be farmer *participation* – in setting the research agenda, experimentation and evaluating technology – that would renew farmers' interest in their land, develop and deliver a basket of relevant technologies to chose from, and promise a positive spiral of improved productivity and reduced out-migration...So, the policy model framed the problem of increasing agricultural production so that farmer participation itself would be accepted as an autonomous causal link (Mosse, 2005, p. 33).

Despite these critiques, agricultural extension in practice in Peru has continued to evolve and Soluciones Prácticas has remained wedded to the farmer first paradigm and the related notion participatory technology development (PTD), towing the broader institutional line established within Practical Action, which published a collection of books by Robert Chambers. According to Ortiz (2006) there have been three periods in the evolution of agricultural extension in Peru. The first dates to at least the beginning of the twentieth century, when the Peruvian government attempted to support agricultural production through the establishment of a variety of technical service agencies, as well as knowledge production and dissemination units such as the National School of Agriculture and Veterinary practices, which ultimately became La Molina National Agrarian University in the 1960s. A second phase emerged in the 1950s through a programme known as SCIPA (Servicio Cooperativo de Producción de Alimentos; the Cooperative Service for Food Production), which was established by the Peruvian government and the US Department of Agriculture (USDA) and designed to increase agricultural production and food self-sufficiency in Peru. This period was described by informants such as Javier Escobal (a leading Peruvian economist) and Luis Paz (a senior official at Sierra Exportadora, a recently established government institute dedicated to enhancing Andean production) as one dominated by high-profile and high-cost excursions to rural areas by agricultural experts, largely originating in the United States (interviews, November 2012 and May 2013, respectively).⁶⁸ With their poor understanding of the demands of Peruvian agriculture, these experts simply attempted to insert North American agricultural

⁶⁸ Javier Escobal is a senior researcher at GRADE (Grupo de Análisis para el Desarrollo; Development Analysis Group); Luis Paz is an advisor to the executive presidency of Sierra Exportadora, a multi-sectoral government initiative dedicated to adding value to various stages of the Andean production chain.

techniques and technologies into Andean production systems, often ignoring the specific requirements of local material and cultural contexts.

The third period began with concerted state intervention and expenditure, which coincided with the 1969 agrarian reform initiated under the military dictatorship of Juan Velasco Alvarado (1968-75). Aimed at eliminating colonial legacies of personal servitude and coerced labour, the reform revolved around a programme of land re-distribution to reverse centuries concentrated land ownership (Mayer, 2009). However, in the decades that followed, the effects of the Shining Path and the subsequent period of Fujimorismo decimated much of the programme, along with its agrarian co-operatives and cultural initiatives that revived indigenous traditions. In the 1980s cooperatives were divided into small farms, which then returned to private ownership (Ortiz, 2006), while new state institutions such as INIA (Instituto Nacional de Investigación Agraria; National Institute of Agrarian Research) were emerging.

By the 1990s, private land tenure was once again the norm (Ortiz, 2006), and state institutions associated with agricultural services had been gutted; the National Institute of Agricultural Research and Development, for example, was established in the 1980s but in the 1990s folded into an under-resourced Ministry of Agriculture (Coello et al., 2006a). Ortiz (2006, p. 483) summed up this dissolution of state provision of agricultural services: “during the 1990s, agricultural policy in Peru addressed the reduction of subsidies, the promotion of free market relationships, and the participation of the private sector in research and provision of information. The role of the state, therefore, was reduced to providing only basic services such as certain types of agricultural information (e.g., prices) to support farmers’ decision making”. To fill the gap, an ‘informal’ system of agricultural extension emerged, revolving around private provision by a small cohort of individuals and private organizations (Coello et al., 2006a), and characterized by new inter-institutional relationships (Ortiz, 2006). It was not until the twenty-first century, however, that the Peruvian state began actively reconstructing the ailing extension system, having re-cast itself as an ‘innovator’ for rural development.

It was in this context of a hollowed out state and the emergence of private agricultural extension services that heightened interest in the *campesino-a-campesino* model began to emerge. Yet this interest was not simply about an effective and ‘farmer first’ way of filling the gaps in agricultural service provision; it was also conceived as a cost-effective option that

didn't require the reinsertion of state institutions into the far-flung reaches of Andean agriculture. Javier Escobal – a self-confessed neoliberal – cast the benefits of these horizontal models in terms of budgetary savings, enabling public expenditure elsewhere to stimulate the economy *and* support redistributive mechanisms, while the *kamayoq* take care of agricultural extension services. For the state, then, the proliferation – from the 1990s – of NGOs acting as 'flanking mechanisms' was a welcome shift that facilitated the concomitant processes of neoliberalization and decentralization (Bland & Chirinos, 2014), as a diverse body of at least 600 NGOs began to take on the task of service provision (Ortiz, 2006). This diverse body, however, struggled to develop a co-ordinated approach in the context of a dearth of national policies designed to guide their endeavours. How, then, did the *kamayoq* emerge within what now appears to be a well-coordinated framework of *campesino-a-campesino* agricultural extension in the Sierra Sur?

Re-institutionalizing *kamay*: the creation of 'ethnic expertise'

in *Escuela de Kamayoq*

Contemporary *kamayoq* are indigenous, community-based 'specialists' who operate within programmes of *campesino-a-campesino* 'technical extension', implemented largely by non-governmental organizations (NGOs) but increasingly incorporated within processes state re-building. As I explained in the previous chapter, however, the role of the *kamayoq* has shifted temporally according to different modes of production and forms of political-economic organization, spanning pre-Inka societies of community-based hydraulic agro-pastoralism, rigid structures of Inka imperial governance, debasement to the status of delegated stewards on Spanish haciendas. It was not until the late twentieth century that the formalized role of the *kamayoq* was revived, largely at the hands of internationally financed non-governmental programmes, in an attempt to provide technical and agricultural services in the wake neoliberal reforms.⁶⁹

⁶⁹ While the formal roles of *kamayoq* disappeared from records, their practices may have continued in some places. In the small community of Mollebamba (Apurímac), for example, *kamayoq* annually rotate to oversee potato crops, independently of NGO and government programmes.

At the turn of the millennium, Andean communities reeled from the double assaults of the previous decades: the violent insurgencies of the Shining Path; and the aggressive neoliberal restructuring implemented by the self-acclaimed vanquisher of Abimael Guzman, the leader of the Shining Path. These neoliberal restructuring policies were implemented by now-disgraced former president, Alberto Fujimori, whose approach became known as *Fujimorismo* and his aggressive tack of neoliberalization as *Fujishock*. In the Andes, Fujimori was popular for a time, after taking the acclaim for defeating the Shining Path, building numerous schools (painted bright orange so everyone would know), and participating in transparent forms of cultural patronage and clientelism (Mayer, 2009).⁷⁰ This façade contrasted Fujimori's approach of neoliberal agrarian restructuring, which entailed the dismantling of the state apparatus associated with agrarian reform and rural development, including: closure of the agrarian bank; abolition of subsidies and farmer's credits; the closure of both the agrarian reform office and the bureau responsible for rural Andean communities; and the abolishment of the few remaining agricultural protectionist laws (Crabtree, 2003; Mayer, 2009).

Within this context, internationally-funded programmes began to experiment with new approaches of "farmer innovation" as a way of filling the gaps in agricultural extension services (Hellin, 2013, p. 42), thus reflecting the new trend of inter-institutional co-operation in agricultural services identified by Ortiz (2006). The discursive and ideological revival of the *kamayoq*, however, began with the irrigation-focussed programmes of PRODERM (1986-1990) and Plan Meriss (1987-present). The former – the Project of Rural Development in Microregions (Proyecto de Desarrollo Rural en Microregiones) – was a relatively short-lived rural development project in the department of Cusco, financed by Dutch Development Aid, the European Commission, and the Peruvian government. The latter – the Plan for the improvement of Irrigation in the Highlands and Rainforests (Plan de mejoramiento de Riego en la Sierra y Selva) – is a long-running project implemented by the regional government of Cusco to improve irrigation in the Sierra Sur.

As PRODERM struggled to meet its remit of improving irrigation for the remaining thirty per cent of its target population (4,500 *campesino* families), the parallel project of

⁷⁰ The Peruvian secret police had in fact already tracked down Guzman by the time Fujimori assumed the Presidency, leaving the President with little more to do than sign the paper's for Guzman's arrest.

Pachamama Raymi (which translates as Festival of Mother Earth) was established to more effectively and efficiently achieve these technical goals. After the director of Plan Meriss made the observation that traditional irrigation experts in Arequipa valley, known as *unu kamayoq* (see Table 1 in chapter three), were skilled in traditional irrigation techniques well-suited to a widespread irrigation programme, *Pachamama Raymi* made the historical-discursive case for reviving the related concept of *kamachiq*. It did so on two grounds: to integrate rural development projects within local cultures and customs; and to meet the series of technical goals, previously established by PRODERM, through a combination of peer learning and the introduction of culturally-embedded “motivators” (van Immerzeel, 2006). The aim was to introduce “clear and demanding targets” regarding both the innovations to be introduced and the numbers of beneficiary *campesino* families to be reached.

The *kamachiq* would help to achieve these targets by disseminating the techniques of the *unu kamayoq* on a peer-to-peer basis; in July 1987, therefore, nine *kamayoq* were hired as part of *Pachamama Raymi* in order to train *kamachiq* in the programme’s target communities. These *kamachiq* would be selected according to a series of competitions, designed to be a motivator of technical improvement in irrigation, first between *campesino* families and later between communities of families. The *kamachiq* would lead a technical team responsible for adapting newly introduced agricultural techniques and technologies to the everyday practices of agriculture in the Sierra Sur, and each team would compete to illustrate effective implementation strategies (van Immerzeel, 2006).

The notion of *kamay* was therefore undergoing incremental shifts according to the trajectories of development interventions that were designed to improve the uptake of agricultural techniques, while drawing on culturally appropriate forms of knowledge transfer and motivation. Although pre-Hispanic Andean societies did use the notion of competition to establish productive and socially reproductive roles (Guaman Poma De Ayala, 1615/1616), the institutionalization of competition under PRODERM and *Pachamama Raymi*, in order to determine expert roles among *campesinos*, marked a shift from the external provision of agricultural services to the creation of local responsibilities for technical improvements. Since *kamachiq* were deemed to be resource experts, but had no formal channels through which they could directly affect decision-making in resource governance, this shift also raises questions

about the reproduction of neoliberal forms of individualized responsibility without power – an issues I return to below.⁷¹

At the same time as *Pachamama Raymi* was fine-tuning its contests among *unu kamachiq*, the widespread practical revival of the *kamayoc* was moving forward with the influence of agronomist Toribio Quispe Jallo, who developed the system for training farmer extension agents that was rolled-out via the ‘technical extension’ programme of Soluciones Prácticas. Toribio Quispe dedicated his career to re-building agriculture in Cusco around Andean cosmologies and notions of biodiversity. He was particularly influential in the field of community-based governance of irrigation, and was instrumental in establishing a network of farmer-trainers. In some ways, his outlook reflected the perspectives – which I explore in detail in subsequent chapters – on decolonizing Andean development that are promoted by organizations such as PRATEC (the Andean Project of Peasant Technologies), as he linked issues of agricultural sustainability with Andean agricultural practices and relations with Pachamama (mother earth). PRATEC (PRATEC, 2012; Rengifo Vasquez, 2008b) has developed a body of work on the notion of *iskay yachay*, which they describe as a “minka de saberes” and which roughly translates to knowledge reciprocity (see chapter six for details on the two Andean forms of reciprocity known as *ayni* and *minka*). In practical terms, *iskay yachay* revolves around a network of local educators who act as cultural mediators in locating their teachings in notions such as the Andean agrofestival calendar and communal organicity – a kind of more-than-human communal living.

In contrast to the anti-Imperial approach of PRATEC, however, Toribio Quispe worked alongside government and non-government programmes of both national and international origin in order to entrench his visions of sustainable development. The initial focus of the programme rolled-out with the assistance of Soluciones Prácticas remained on irrigation, with

⁷¹ Pachamama Raymi has since evolved, and is incorporated within the work of IAA (Instituto para una Alternativa Agraria) – a Cusco based organization that works largely with *yachachiq* in a similar capacity to the work being conducted by Soluciones Prácticas with *kamayoc*. An entire thesis could also be written on the phenomenon of the *yachachiq*. Nonetheless, for some insights on IAA and agricultural technology extension programmes involving *yachachiq*, see Escobal et al. (2012). Alternatively, see much of the work being conducted by Grupo de Apollo al Sectoral Rural (Group for Rural Sector Assistance) – an institute based at the Catholic University of Peru in Lima, but which works with *yachachiq* on peer-to-peer projects of distributing renewable energy technologies to rural areas.

a pilot training project launched in 1991 with six communities from the Vilcanota Valley of Cusco. The objectives were: to strengthen food production and food security through improved irrigation; to enhance access to and control over irrigation among small farmers; to expand irrigation technology options for small farmers; and to contribute to the formulation of national and regional policies regarding the development and management of water resources. To achieve these objectives, the training programmes were designed to enable the “faster flow of knowledge transfer and technical skills among peasant farmers” (de la Torre Postigo, 2004, pp. 30, author’s translation) – an approach that was based on the observations of Peruvian economist Adolfo Figueroa that great improvements could be made to *campesino* agricultural productivity if the uptake of technologies could be enhanced.

On this premise, Soluciones Prácticas expanded its farmer training programme to the Canchis region of Cusco, seeking a form of enhanced knowledge transfer that revolved around four core assumptions: traditional resource governance techniques have been developed over centuries of experience and should therefore be enhanced rather than replaced; such enhancement should proceed according to local contexts of natural, institutional, and cultural capacity; development interventions should focus on the priorities and needs of local producers; Soluciones Prácticas should intervene to accompany these local efforts in order to develop technological alternatives that enhance local productivity (de la Torre Postigo, 2004). At the centre of this model, the *kamayoq* were deemed to function as “trans-cultural bridges”, channelling capacity-building activities from Soluciones Prácticas to *campesino* families and irrigation committees. A new form of ‘ethnic expertise’ was being cultivated, as *kamayoq* became ‘mediators’ in Latour’s sense of not only having the capacity to transport information, but also to translate, redefine, and redeploy what they transport.

In 1996, a second stage in the re-institutionalization of the *kamayoq* involved a scaling—up to twenty-two communities, which was made possible by increased international funding from sources such as the European Union and the UK’s Department for International Development (DfID). With this funding, Soluciones Prácticas introduced a formal training programme in the department of Cusco known as Escuela de *Kamayoq* (*kamayoq* school), the aim of which was to expand beyond irrigation and build the capacity of *kamayoq* in five specialized technical areas: irrigation, Andean crops, horticulture, livestock, and forestry. Specific training focussed on technical issues such as water management, seed storage,

revolving funds of potato varieties, vegetable gardens with basic greenhouse technologies, the reforestation of hillsides for the protection of soil and irrigation canals, animal nutrition and the management of pastures, and animal health and disease prevention.

Three components formed the rationale that underpinned how the Escuela de *Kamayoq* training programme would go about its task: 1) it should be decentralized in the sense that activities should be carried out in various places, such as the productive facilities (fields, barns, etc.) of *campesino* families and communities, rural enterprises, state agricultural experiment centers, and development institutions. 2) It should be “eminently practical”, meaning that the training should focus on the real problems of irrigation management and agricultural production in the target area. 3) It should be inserted into the local *campesino* culture, meaning that training should be conducted in Quechua and in a way that does not conflict with local rules and norms (both customary and formal) (de la Torre Postigo, 2004). These components reflect some of the decolonizing principles of intercultural education encapsulated in terms such as *iskay yachay* and *diálogo de saberes* – both of which refer to a transcultural process of reciprocal knowledge exchange (PRATEC, 2012; Rengifo Vasquez, 2008b). As my analysis in this chapter and those that follow reveals, however, the unfolding of the *kamayoq* system has veered away from these radical and optimistic views on transculturation.

Nonetheless, Soluciones Prácticas’ approach has been lauded as a success. In assessing initial phases of Escuela de *Kamayoq*, de la Torre (2004) drew on various testimonials from graduates to point to the impact of the school in terms of: increased production at the household level (particularly in relation to enhanced production of vegetable and improved pastures for livestock); increased quantities of surplus production available for market retail and income generation; increased options in ad hoc employment as a consultant to other *campesinos* and development institutions, thereby further contributing to income generation. In addition, de la Torre attempted to scratch beneath the surface to uncover the impacts of the school on “self-esteem and family relationships”, arguing the *kamayoq* felt enthused, empowered, more responsible, and more confident not least due to the increased respect they garner from neighbouring *campesinos*. Perceptions amongst the majority of *campesinos* (75% of interviewees) appeared to support this finding, though a smaller portion also acknowledged a feeling of envy towards the *kamayoq*. The *Kamayoq* School also seemed to open up gaps

between the *kamayoq* as a cadre of technical assistance experts and other interest groups, whether sector-specific (such as irrigation committees) or specific to community politics (community assemblies). As I explain below, the longevity of concentrated development interventions with the *kamayoq* appears to have deepened this fissure between the *kamayoq* and *campesinos*, as *kamayoq* are increasingly perceived to do as they please, outside of the traditional forms of collective responsibility associated with Andean communities.

Despite these emerging fissures, more recent assessments of Soluciones Prácticas' approach to technical extension have continued the trend of positive normative assessments. In an internal report, Jose Solis (2008) concluded that Escuela de *Kamayoq* has had ten lasting impacts: increased family welfare (including financial gain); the development of knowledge and skills for autonomous improvements to livelihoods; increased revenues and subsequent investments by *kamayoq* in their living conditions; enhanced financial capacity and entrepreneurship leading to an improved ability to enter and succeed in the market place; enhanced food security; strengthened families and kinship networks, creating a more robust household; reduced vulnerability to stresses and shock in the availability of natural resources; enhanced self-esteem; the expansion of social and networks (social capital), leading to improved economic opportunities; and, employment as contractors for other *campesinos* or development institutions, thereby raising income levels.

With these positive reports, along with attention from national news media in Peru, the *campesino-a-campesino* model of farmer training became a flagship programme for Soluciones Prácticas. Following twelve rounds of training in Escuela de *Kamayoq*, and an organization-wide conceptual shift to the more expansive notion of “community-based extension systems” (CBES), the desire to expand and scale-up the programme saw Escuela de *Kamayoq* evolve into El Centro de Innovación y Agro-negocios Rurales (CIAR; Centre for Rural Innovation and Agribusiness). As part of CIAR, and in an attempt to replicate and expand on the successes of the *Kamayoq* in Cusco, in 2010 Soluciones Prácticas introduced a *kamayoq* training programme to the departments of Apurímac and Ayacucho. The objective was to build productive and organizational capacity among *alpaqueros* (alpaca herders) by developing a technical extension system of *kamayoq* that will enhance equal access to markets, strengthen rural development capacity within local and regional governments, and

establish a macro-regional organization of *alpaqueros* that is linked to regional “*mesas técnicas*” (technical roundtables).

In the remainder of this chapter, I draw on research conducted in both the well-established terrain of Escuela de *Kamayoyq* in Cusco and the new grounds of spatial expansion of CIAR in Apurímac. In exploring these contexts, I illustrate that the data on the practical results of *Escuela de Kamayoyq* and its evolution into CIAR does not tell the entire story. As ‘ethnic experts’ operating within the above programmatic context, the *kamayoyq* are conceived by NGOs in multiple ways: as experts in alpaca (re)production charged to re-distribute their knowledge within a technical extension system, thereby simultaneously enhancing the sustainability of alpaca resource-based livelihoods, making these resources more available to market forces, and intervening in decision-making as a collective of leaders in order to establish an enabling political-economic environment.⁷² Their role is promoted by Soluciones Prácticas due to the technological relevance of intercultural training, the horizontal mode of the cultural production of knowledge, the method of mutual learning, and for promoting values of identity and self-esteem (Solis Mora, 2008).

However, Raul Ho – a former consultant to Soluciones Prácticas – found the *kamayoyq* to have a shifting, asymmetric, and potentially conflicting role in shaping Andean production, as they better serve surplus-producing families that sell to the market than traditional subsistence families that operate according to previously common reciprocal arrangements. “Now there are very few cases of *kamayos*”, he argued, “that have assumed their assistance role as a kind of civil service...in the sense that ‘Ok, I selflessly help my neighbours, I teach and explain how technologies work so that they can also benefit...without asking anything in return’” (interview, December 2012). In what follows I explore how these conceptions of the *kamayoyq* play out in the everyday realities of Andean life, further interrogating the tensions and conflicts hinted at by Raul Ho, and asking whether the networked forms of ‘ethnic expertise’ carried by the *kamayoyq* can contribute to the kinds of decolonized territorial development

⁷² Although I have painted a relatively coherent picture of the international network of development science and knowledge production that has informed these programmes of *kamayoyq* training, Jenny Goldstein (2014a, 2014b) has pointed out that these kinds of international networks are not internally coherent, and often produce divergent and competing knowledge claims. My focus is on the effects of these claims, as embodied in the *kamayoyq* phenomenon.

introduced above, given this shifting position away from reciprocity and towards a kind of contracted service provision. To begin this analysis, a second contextualizing move is required in order to understand how the *kamayoq* and a *campesino-a-campesino* methodology fits into the context of inter-connected household economies in the Sierra Sur.

Positioning *kamayoq* II: household economies in the Sierra Sur

Amongst the diverse rhetoric that is channelled from NGOs to the *kamayoq* via the kinds capacity building workshops that I describe later in this chapter, the notion that “I must get my own house in order first” speaks to the enduring importance of householding – Polanyi’s “historically important” (Polanyi, 1958, p. 330) fourth component of economic integration – in Andean life and economic organization. From this chapter on, I explore the ways in which Andean households – as productive units – fit within and are connected to a dynamic, networked context of economic integration at various scales. In invoking the term ‘household’, I risk implying that Andean socio-economic systems are static, consisting of neatly partitioned units fixed in space and time. It is true that household agriculture remains ubiquitous and that it occurs on small farms operated by family labour, with very little in the way of a paid workforce. Labour exchange also remains relatively common in the forms of *ayni* or *minka* (reciprocal relations, upon which I elaborate in chapter six), which can help to spread agricultural labour demands beyond the family during busy times, such as planting and harvesting seasons. It is perhaps also true that it is only the wealthier families capable of achieving large volumes of surplus production for market exchange, that possess the capacity to hire labourers on a regular basis.

Nonetheless, in a report commissioned by Soluciones Prácticas, Raúl Ho argued that the various combinations of these strategies means there is no longer a unitary category of small-scale agriculture in the Andes. Rather, three sub-categories point to a degree of intra-sectoral differentiation: (i) subsistence, low-income households often located in unfavourable physical environments; (ii) dynamic households, which balance subsistence activities with production for market exchange (a state that Ho called ‘dynamic equilibrium’); (iii) surplus producing households that generate significant surpluses in order to cover their own needs as well as

operate in the market on a permanent basis (Ho Chau, 2012).⁷³ While this differentiation certainly exists, we might also add a fourth category of proletariat households, which are often close to market towns and lack the resources necessary to meet subsistence needs, meaning that they dedicate their labour to off-farm activities. We can also see other forms of socio-economic organization that cut across the three or four groups, with associations and co-operatives, for example, offering alternative strategies of ‘dynamic equilibrium’ (see chapter six).

The point, however, is that household economies in the Andes are neither a fixed category nor a culturally distinguishing factor – a point worth noting when reading through the case of the *kamayoq* as a dynamic institutionalized form of ‘ethnic expertise’ that supports diverse forms of economic integration. It is therefore worth elaborating on the context in which the *kamayoq* operate, on the ways in which they keep the dynamic forms of socio-economic organization amongst Andean household economies inter-connected. In this context, Enrique Mayer has already done much to advance our understanding of Andean economies. To contextualise my analysis, then, I draw on Mayer’s (2002) treatment of the “articulated peasant”, so-called because Andean household members are inter-connected (‘articulated’) with other households, their communities, and commodity markets. To this we can add a host of government and non-government institutions that continue to shape and re-shape Andean socio-economies in often uneven and unpredictable ways (as I later explore). However, Mayer’s positioning of Andean households revolves, not around the household *per se* as a basic unit that organizes production, distribution, consumption, and its own reproduction, but rather around the three interconnected elements of house, field, and money.⁷⁴ The focus on the latter, in particular, as a “disturbing element” (p1) somewhat akin to Polanyi’s (2001) fictitious commodity, takes us past the discipline-defining works of the likes of John Murra (2009), which have tended to de-emphasize the role of money and market exchange.

The need to move beyond these idealized understandings of Andean households bound by non-economic forms of organization and exchange is personified every week in the small

⁷³ At the time of the report submission in January 2012, Raúl Ho was a freelance consultant; at the time of my interview with Raúl in December 2012, he was employed by the Ministry of Agriculture.

⁷⁴ The importance of these three components to Mayer’s approach is reflected in the title of the Spanish edition of the same book: *Casa, Chacra, Dinero* (House, Field, Money) (Mayer, 2004).

market towns that connect disparate Andean communities and households. On market day, which varies between municipalities in order to avoid conflicting obligations, *campesinos* travel hours by foot, horse, or *combi*, transporting as much of their surplus production as they – and sometimes their animals – can carry in order to participate in this now ritualized event, which transforms sleepy town squares into bustling, and at times heated, spaces of interconnection and exchange. While some *campesinos* line up outside the Mayor’s office to report a recent grievance, others quickly set-up their market stalls before disappearing to do their social rounds. Meanwhile, various interest groups convene in the municipal hall, as they discuss future strategies while attempting to overcome internal differences. Others still aim to offload their meat, wool, and/or live animals as quickly as possible, before disappearing back to their homes after buying their required supplies.

Market day is therefore a dynamic space that is characterized, not by an over-riding of traditional forms of reciprocity and collectivism by unyielding forces of market exchange, but by multiple and diverse intersections of individual and collective exchange, and of both competition and solidarity. At the end of the day, the physical space of the market may disband until the following week, but the relations that constitute it remain. The point is that we increasingly need ways of understanding the multiple forms of connection between household levels of production and consumption, and market and/or community-based forms of exchange *and* reciprocity, solidarity *and* competition.

In an attempt to understand these dynamics, and to grapple the overlapping spheres of household composition, productive activities, consumption, and patterns of power and authority, Mayer (2002) presented four ideal types of Andean households as productive, economic units in their own right, but also interconnected with the broader relations of economic integration. It is worth summarizing those ideal types here, in order to contextualise the contemporary function of the *kamayoq*. The first ideal type is the “black box” model, which artificially distinguishes between “internal” and “external” relations of the household. Mayer directly implicated Karl Polanyi’s notion of householding in this category, arguing that Polanyi made a distinction between different forms of integration that are either within the household (provisioning, pooling, sharing) or beyond its relational confines (reciprocity, redistribution, exchange).

The second ideal form is the kinship model, which “subordinates economic transactions to an analysis of kinship structures, behaviours, and norms” (Mayer, 2002, p. 9), thereby creating a moral economy that determines the social relations of household members and the internal division of labour according to socially preferred structures. This approach suffers from a tendency to naturalize relationships within the household, thereby shrouding complex gender dynamics and intra-household conflicts that emerge from the competing forces of household solidarity and individual political-economic gain.

Third, Mayer placed the ‘house model’ into dialogue with Andean ecologies and cosmovisions, presenting a cultural-ecological account of the material flows of energy, nutrition, crops, etc. Here, Mayer built out from John Morra and overlapped with other Andeanists, such as Karl Zimmerer (1996), to explore how households exploit multiple reproductive zones. This ecological model conceived Andean households and their ‘model livelihoods’ of thrift and resource conservation in terms of experiential, cultural practices that position agricultural production within broader environmental settings. Those households that fail in this regard might be cast as the “diversity-deserting Quechua farmers” described by Zimmerer (1996, p. 182), thus reflecting the dangers of deterministic, essentialist readings associated with cultural-ecology. Contrast this with the final ideal form of the Andean household, which is bound within the ‘rational choice model’ and its emphasis on the calculating individual economic actor. Work in this context has focussed on charting farm inputs and outputs in detail, measuring efficiencies and constraints, offering technical solutions to increase productivity, reduce costs, and make market decisions more efficient.

In this context, Mayer made the important distinction between the household and the term ‘*peasant*’, which has been used in this body of work to depict their exploitation within persistent extractive markets and ever-expanding global capitalism. The two terms are not synonymous, he argued, but they do overlap, pointing to a dynamic understanding of peasantries that continuously adjust to “extreme conditions of resource insufficiency, unfavourable markets, and the insensitive state” (Mayer, 2002, p. 25). Mayer ultimately conceived the Andean peasant system as both a firm and a household – as concerned both with thrift and recycling for internal provision, and with reducing costs partly through externalization. This household-firm, however, operates on the basis of petty commodity production according to the exchange logic of commodity-money-commodity, which as Marx

(1867) pointed out was ultimately replaced under advanced capitalist modes of production by the logic of money-commodity-money (plus profit/surplus value). In linking a politics of resistance to the dynamics of everyday production relations, Gavin Smith (1991) illustrated how these petty commodity producers band together in producer's guilds and farmer's associations, in order to provide economic protection and social solidarity, as well establish the rules of the game of local competition.

Why is this assessment of Andean household economies relevant to an analysis of the *kamayoq*? In this chapter and the two that follow, I illustrate how the *kamayoq* cut across these ideal forms of household organization, thereby acting as a supra-household institution that partly defines the inter-connection of households within Andean communities. First, *kamayoq* link their own household *and* other households to broader community and macro-economic relations and structures; that is, they defy the "black box" model and interconnect households according to relations of *both* reciprocity and market exchange. Second, therefore, *kamayoq* extend the notion of a moral economy beyond direct forms of kinship, establishing community-based networks that partly define appropriate conduct (but in often incoherent and contradictory ways). Third, in establishing these networks, *kamayoq* regulate material flows within, between, and amongst households, creating a network of supra-household flows within the community. Finally, *kamayoq* extend various ways of conceiving and managing these flows, including rational choice perspectives promoted by the neoliberal Peruvian state (at various scales) *and* collective, communitarian perspectives that seek to enhance the well-being of Andean communities through forms of collective solidarity and cooperation.

I reflect in detail on the notion of collective solidarity in chapter six; here, however the point is that household economies in the Andes cannot be understood simply as a patchwork of partitioned, autonomous productive units. Rather, intra-community connections amongst Andean households, through *both* competitive relations of market exchange *and* collective relations of socio-economic solidarity and cooperation, are more complex and important than has often been depicted. Today and historically, *kamayoq* have played an important role as an institutionalized form of supra-household inter-connection.

Yet these inter-connections do not unfold neatly; as Marisol de la Cadena (1989) originally pointed out and Enrique Mayer (2002) later summarized, intra-community conflicts emerge from contested forms of cooperation. These conflicts emerge between groups, rather

than at the individual level, and manifest in a politics of community governance through power struggles that can create permanent fissures and divisions within the community as an institution. Often, powerful groups of elite extended families coalesce to dominate formal positions within the community (and therefore also in community-government inter-relations), enabling these groups to manage the community according to their own interests. As Carlos de la Torre (2004) pointed out, *kamayoq* often aspire to rising to the status of such “power elites” (as César Fonseca put it (in Mayer, 2002, p. 39)) by occupying important positions in community assemblies, for example.

As I illustrate below, however, such representation does not emerge neatly, in part because class relations also exist within Andean communities. Many of these overlap with ethnic divisions between *mestizos* and *indios* (de la Cadena, 2000), but they also emerged from the dominance of agricultural cooperatives, which were managed by power elites in the wake of the 1969 Agrarian Reform. Nonetheless, as Mayer (2002) went on to explain, communities in the Sierra Sur are similarly organized around both a communal governing body empowered to create land use rules, and a general assembly that opens up the communal governing body to democratic processes capable of changing established rules. As I explain below, the *kamayoq* are part of the intra-community fissures described by de la Cadena, and they are also affected by broader changes to Andean communities that affect the role of these communal governing bodies and assemblies. The emergence of participatory budgeting, for example, has changed the ways in which communities manage and maintain existing infrastructure and new infrastructural projects, such as irrigation, road building, etc. These changes unfold in uneven ways and with unequal effects; below, however, I offer some reflections on the trends I observed in terms of the role that *kamayoq* play in acting as mediators at the community level, and increasing between communities and broader scales of decision-making.

“The *kamayoq* act as a two-way door”:

the shift from ‘aprender hacer’ to ‘saber hacer’

“The *kamayoq* act as a two-way door...the training allows the communication of content without facing cultural barriers, and it can be received with an attitude of dialogue and constructive debate” (de la Torre Postigo, 2004, pp. 33, author’s translation).

Carlos de la Torre's depiction of the *kamayoq* as two-way doors reflects the fact that culture – and ethnic difference – is seen as a barrier to successful development interventions oriented towards the uptake of agricultural techniques and technologies. Rather than leading a process of locally developing solutions to agricultural and livelihood problems, *kamayoq* are assumed to act as 'mediators' responsible for translating the technical content communicated by NGO staff and engineers into culturally digestible forms that will increase the likelihood of uptake. Although the *campesino-a-campesino* model is often held up as an empowering example of development *process*, little attention has been paid to the *means* itself – to the dynamic that is created in training these 'two-way doors'. In this context, Walker et al. (2008, p. 538) pointed to the ways in which the *taller* – or workshop – raises questions about the imposition of Occidental knowledges and codes of conduct in this "chalk and talk variety" of capacity-building, which reproduces the kinds of cultural and knowledge deficit models that entrench the gap between 'expert' and 'beneficiary'. This critique somewhat applies to the training of the *kamayoq*, as expert NGO staff and consultants arrive with pre-determined objectives, established workshop formats, tool-kit participatory techniques, and limited time frames to conduct *talleres* according to the pedagogical *status quo* of experts professing to project beneficiaries.

However, the case of the *kamayoq* also somewhat contradicts Walker et al.'s (2008) conclusions on the production of pedagogical subjects within these spaces, which stated that little active learning was entailed, knowledge transfer rather than knowledge creation was the dominant goal, and participants were simply expected to 'learn to be learners'. In addition to the knowledge production that often results from *kamayoq talleres*, the training programme is organized around the notion of *aprender hacer* – learning-by-doing. As a training programme rather than a physical location, the majority of learning that takes place as part of *Escuela de Kamayoq* revolves around practical training in the field.

Here, they tackle problems that are co-defined according to *kamayoq* demands and NGO expertise, suggesting that *kamayoq* livelihoods are at least in part being "rendered technical" by the creation of a list of problems for which technical solutions are already known to exist (T. M. Li, 2007). The term "technical extension" implies from the outset that the expertise of development practitioners can simply be extended to rural communities by adapting culturally embedded systems and putting the *kamayoq* to work as culturally-coded 'intermediaries'

(rather than mediators) of technical solutions.⁷⁵ Yet *kamayoyq* training has evolved over decades according to *mesas técnicas* – participatory decision-making forums around the technical issues of livelihood improvement. While these *mesas* may immerse the *kamayoyq* into the governmental spaces of participatory capacity building, they also force us to reconsider the active role played by these “beneficiaries”. *Kamayoyq* have shaped the form and function of the *campesino-a-campesino* model through generations of participation, suggesting that they act as more than mere ‘intermediaries’ and that their process-oriented understanding of knowledge has been articulated through the evolution of the *campesino-a-campesino* model.

Aprender hacer also underpins the everyday lives of the *kamayoyq* once they graduate from *Escuela de Kamayoyq*, as they educate other *campesinos* through practical illustration and demonstration, thereby grounding technical extension in the established cultural relationships of rural Andean life (training usually occurs in Quechua, for example), and contributing to the notion that *kamayoyq* function as “transcultural bridges” (de la Torre Postigo, 2004, p. 28). This hands-on, practical education typically revolves around the identification of a problem by a *campesino* and a subsequent illustration in resolving the problem by the *kamayoyq*; the process of rendering technical therefore extends out from NGOs, and is materialized in practice by the *kamayoyq* in the particular and contextual *campesino-a-campesino* event.

In line with critiques of neoliberal multiculturalism, which have identified how service provision is conditional on re-enacting imagined notions of indigeneity (Muehlmann, 2013), there is also a performative element to the knowledge-sharing event. As *kamayoyq* attempt to replicate NGO capacity-building scenarios while simultaneously emphasizing their cultural roots, the farmer-to-farmer event re-performs the tension between technical knowledge extension and cultural re-affirmation. In 2013, for example, I spent much of February – part of the wet season in the Andes – with César, a *kamayoyq* from the district of Checca, in the Canas Province of the Department of Cusco. One morning, César and I embarked on the one-and-a-half-hour walking commute, wading through rivers and crossing sodden pastures, to conduct a knowledge-sharing event with some of his neighbours.

⁷⁵ For Latour (1993), ‘intermediaries’ are agents stripped of the transformative power of ‘mediators’; they simply transport, transfer, and transmit energy, without affecting the form of this energy in the process.

On our arrival to a small parcel of pastureland containing an equally small mixed herd (of cattle, alpacas, and lamas), a handful of *campesinos* began to congregate. César quickly opened his satchel and withdrew his accessories. First, he pulled on a t-shirt that he had been awarded for attending a capacity-building excursion in the northern department of Cajamarca, over which he slipped a traditional Andean *chaleco* (a richly decorated waistcoat), before replacing his baseball cap with his prized *sombrero* (which was decorated with a knitted hat-band known as a *centillo*). He then set about preparing the materials he required to conduct the knowledge-sharing session, before beginning the process with a typically formal introduction. To my surprise, the introduction was not followed immediately by practical demonstration with his livestock; instead César continued to stand in front of the small group (now sitting on the still damp pasture), as he read from his field manual – a technical guide that he had received and annotated during his training sessions with Soluciones Prácticas. Except for the occasional interjecting question, this format continued for almost an hour, as César resuscitated every detail of his training and experience.

Eventually, at the behest of one of the attending *campesinos*, we moved towards his livestock to address some health concerns and explore ways to improve the quality of alpaca wool. This process was swiftly concluded – with very little in the way of practical demonstration – as César seemed more interested in fielding questions, before concluding as formally as he had begun. The point here is that *kamayoq* internalise and re-perform the structural tensions of their context; César's *chaleco* fit uncomfortably over his capacity-building t-shirt, just as his allusions to *campesino* knowledge sat uneasily alongside his repetition of technical training content. While *kamayoq* many dress in traditional clothing, they often simultaneously establish a dynamic that reflects formal NGO training sessions, thereby reproducing the prevailing tension between cultural re-affirmation and technical extension as a space of governmentality.

Until recently, this *campesino-a-campesino* knowledge sharing service – however performative – has been provided on a voluntary or reciprocal basis. The younger generation of *kamayoq*, however, is increasingly seeking monetary remuneration – a process that Raul Ho argued is undermining solidarity among *kamayoq* and within the broader *campesino* community. A division has begun to emerge between the older generations that value the continuous reproduction and distribution of Andean knowledges, and the younger generation

that seeks commodified knowledge in order to open up opportunities of monetary exchange and permanent employment.

This generational differentiation among *kamayoq* could be read in terms of Jose Solis' (2008) "stages of *kamayoq* development", of which he argued there are five: the "initiated" *kamayoq*, uncertain in their position and always seeking further institutional support; the *kamayoq* of "a thousand trades", who has expanded into multiple spheres of training and is dedicated to experimentation and knowledge acquisition; the "conformist" *kamayoq*, fully trained but without developed social networks, meaning that their *kamayoq* skills are largely put to use on their own lands and livestock; the "consolidated" *kamayoq*, immersed in dynamic supporting networks, respected in the community, and taking on positions of leadership in various associations and organizations; and finally, the "innovative" *kamayoq*, with multiple established economic activities, high levels of autonomy and productive capacity, and an entrepreneurial spirit.

These five characteristics do seem to reflect the various ways in which *kamayoq* take on their roles; yet these categories are not distinct, but overlapping, and there is no linear progression as Solis suggested. Due to shifts in emphasis within *kamayoq* training, the younger generation of graduates seem to combine the characteristics of the "initiated *kamayoq*" with those of both the "conformist" and "innovative" *kamayoq*. While it may seem contradictory to be conformist and innovative, it simply reflects the fact that these younger *kamayoq* seek to generate income and employment opportunities, without having necessarily built the social network typically associated with the *kamayoq*.

This generation differentiation is being reinforced by the recent introduction of a national programme to certify *kamayoq* as professional 'rural extensionists' (*extensionistas rurales*). This programme – which I explore in detail in chapter five – is governed under the institutional framework of IPEBA (the Peruvian Institute for the Evaluation, Accreditation, and Certification of Basic Education), which was one of three entities created by a 2006 law that established the National System of Evaluation, Accreditation, and Certification of Educational Quality (SINEACE).⁷⁶ IPEBA has been responsible for determining a list of

⁷⁶ IPEBA (*Instituto Peruano de Evaluación, Acreditación y Certificación de la Calidad de Educación Básica*) appears to have been recently dissolved into SINEACE (*Sistema Nacional de Evaluación,*

indicators that is used by a network of sanctioned and accredited organizations to evaluate the knowledge of these ‘rural extensionists’ and award them with a formal certificate (see: IPEBA, 2012a). As Silva-Castañeda pointed out (2012, 2014a, 2014b), these indicator-based frameworks act as a Foucauldian *dispositif* of governmentality: in rendering certain types of knowledge and practice visible or invisible, the IPEBA framework serves to conduct the *kamayoq* both as individuals and as a knowledge-based phenomenon. The *dispositif* of IPEBA certification casts light on the employability of professionalized *kamayoq* knowledge, defined according to dominant Western notions of viable knowledge, while it further shrouds processes of knowledge production and reciprocal distribution within and amongst Andean communities. I take up this theme in detail in the following chapter.

This formal process of certification has been subject to demand amongst *kamayoq*, some of whom argued that it would bring greater credibility, guarantees of *kamayoq* services, acceptance from other community members, and an overall recognition of the *kamayoq* as an indigenous, community-based system (Coupe, 2009).⁷⁷ More recently, however, interviews and focus groups revealed that *kamayoq* perceive the core benefit of IPEBA certification to lie in an ability to find paid employment, whether for local municipalities, NGOs, or the private sector. (Self)Perceptions of *kamayoq* have shifted away from being specialists in indigenous practical knowledge, and towards being professionalized technical experts capable of extending the training techniques of NGOs and taking on specialized positions in municipalities and sector-specific government entities. In 2008, seventy-two per cent of *kamayoq* cited knowledge as their initial motivation for training, forty-five per cent pointed to a knowledge-based obligation to the community, and just seven per cent mentioned income generation (Coupe, 2009).

Five years later, knowledge distribution was still regarded as the key *responsibility* of being *kamayoq*, but motivations among the younger generation for *becoming* a *kamayoq* had shifted almost entirely to income generation. SINEACE, IPEBA, and Soluciones Prácticas have supported this discursive angle, with high-level decision-makers emphasizing the

Acreditación y Certificación de la Calidad Educativa), indicating a shift to an even more centralized approach to governing the certification of *kamayoq*.

⁷⁷ Soluciones Prácticas awards its own certificates for *Escuela de Kamayoq* graduates; however, *kamayoq* have complained that it does not bring sufficient institutional recognition or affiliation.

importance of certification to the “economic life” and “employability” of the *kamayoq*. These key players contextualized the process of institutionalizing certification almost entirely in terms of neoliberalized market benefits, focussing on a flexible labour force, competitiveness (both individual and national), and gaining access to markets – discursive elements that I address in more detail in chapter five.⁷⁸

As Carlos de la Torre explained, this emphasis on employability is not necessarily a problem, and is not something that we can deny the *kamayoq* on the basis of their assumed role as reciprocal knowledge distributors. Nonetheless, it does shift how we perceive the very idea of the *kamayoq*:

The *kamayoq* will find work for NGOs, its ok, it's not a problem; but that's not the idea, the idea is that they become better producers and also that they give some services, technical assistance services. So the idea is for them to be independent...The *kamayoq* idea is our key concept for sustainability, so we believe that after it will be sustainable if we have these people doing it by themselves (de la Torre, interview, July 2011).

The increased emphasis on employability and income generation is therefore also linked to a broader conceptual shift from *aprender hacer* to *saber hacer* – from learning-by-doing to a state of knowing-how-to-do. This shift contrasts Andean understandings of knowledge-as-a-process, but has been institutionalized by IPEBA: in 2012, the institute published *Saber Hacer en los Andes*, an account of systematizing the certification of competencies (or capacities) in rural extension, which ultimately reproduces the narrative of *formación profesional* – of enhancing individual labour market competitiveness through investments in human capital.

The shift is perhaps unsurprising, given the documented deployment in Latin America of ethnicity as a cultural commodity (Andolina et al., 2009; DeHart, 2010; García, 2005a), but is also repositions *kamayoq* as *líderes* (leaders) who simply lead-by-example, and are no longer responsible for the process of sharing knowledge as a commitment to the broader community. Emphasis has shifted to what one *kamayoq* described as “getting my own house in order first”, in an attempt to construct an ideal household and livelihood portfolio that other *campesinos* take it upon themselves to replicate. The process of learning-by-doing, it seems, is being replaced with a static state of knowledge on display, yet this shifting terrain is not uniform. In

⁷⁸ It would be misleading to suggest that deriving economic benefits from *kamayoq* status is an entirely new phenomenon; under the Inka, for example, the *kamayoq* were tax-exempt and were often offered gifts from Inka nobility.

what follows, therefore, I explore two elements of differentiation: spatial differentiation of *kamayoq* according to development interventions; and, the social stratification that emerges from the establishment of a new class of ‘ethnic experts’ or *líderes*.⁷⁹

“They pass like travelling birds”

As I sat alongside *kamayoq* Guillermo on the steep slopes overlooking his alpaca herd and the small community of Quilcaccasa in the distance (in the Aymaraes province of Apurímac), he gave me an uncanny depiction of how rural life in the Sierra Sur can sometimes appear dependent upon the whims of far-off decision-makers, along with their budgetary constraints and their organization’s programmatic priorities. Before the recently introduced programme by Soluciones Prácticas, he told me, “there was nothing, only some technicians came from the municipality and they passed like travelling birds. Even this project has not formed *kamayoq* in all of the communities; they form some *kamayoq* here, do some technical assistance with some *alpaqueros* there” (interview, March 2013).

Guillermo’s reflections depict the spatially uneven pattern of government and non-government programmes in his region, which reflects the broader uneven topographies of development interventions associated with how programmes ‘touch down’ and intersect with existing institutional structures at the local level (Yates, 2012). His perspective also adds complexity to depictions of institutional dependency, such as Valdivia’s (2005) account of how *capacitación* through NGO workshops is often equated with community betterment, empowerment, and ‘progress’, and Bebbington’s (1996) similar conclusion that indigenous peoples often see the adoption of modern technologies as a sign of liberation from domination, even as these technologies imply a degree of dependency. Both are useful critical perspectives, and on-the-whole *kamayoq* did reproduce grateful narratives of empowerment due to the presence of Soluciones Prácticas. Yet Guillermo’s comments indicate a greater degree of reflexivity than either Bebbington or Valdivia afforded their development ‘subjects’. Yet

⁷⁹ It would be misleading, however, to suggest that hierarchical stratification both among the *kamayoq* and between *kamayoq* and other *campesinos* is unprecedented. As I explained in the previous chapter, under the Inka *kamayoq* were rigidly managed according to hierarchies of influence; and with Hispanic colonization new forms of stratification arose from emerging production regimes and a shifting social division of labour.

aware of his position, and of the fact that Andean communities do perceive capacity building to be a developmental and ‘community need’, Guillermo pointed to the unequal spatial dynamic as a more immediate concern, given the unpredictability and fleeting nature of NGO and government interventions.

This spatial unevenness exists at a variety of scales, including between the capacity and resource-rich department of Cusco and the resource-poor, institutionally unstable context of Apurímac. Such contextual differences between Cusco and Apurímac colour the ways in which development interventions take place. The institutional diagrams shown in the figures below illustrate these differences, and reflect the perceptions amongst *kamayoq* of the institutional context within which they operate (the institutions featured in the diagrams are listed in Table 4). Having created these diagrams together, in each focus group a *kamayoq* volunteered to elucidate the rationale behind their design; the diagrams themselves, the elucidation, and the conversation that followed provide insight into how development interventions are experienced in the Sierra Sur.

The first, and most obvious, point to note is the clear difference in institutional contexts, which is visible on two scales. First, at the departmental level, the diagrams for Cusco (**Figure 17, Figure 18, Figure 20**) reveal stark differences between locations; in contrast the diagrams for Apurímac (**Figure 19, Figure 19**) indicate that the institutional context is relatively consistent, albeit characterized by some of the main key players (various levels of government, Soluciones Prácticas, etc.). While in Apurímac there is a general lack of diversity in strong institutional support, in Cusco the institutional context appears to be determined principally at the local level. The difference between Pucacancha and Layo, for example, is made all the more alarming by the fact that they lie merely eighteen kilometres away – closer than some *kamayoq* in Apurímac would travel to get to the nearest market town – and in neighbouring municipalities.

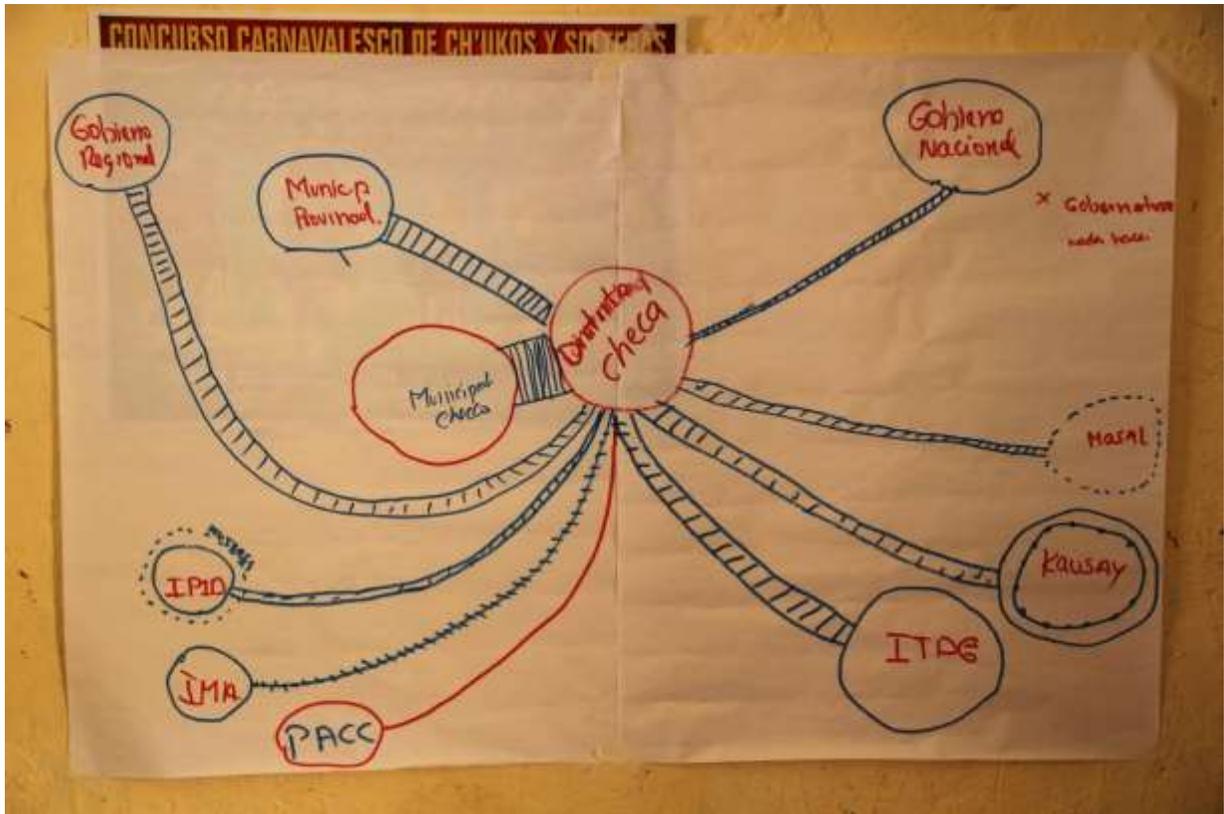


Figure 21 Institutional diagram of development interventions, Checca (Canada, Cusco)

Legend

Distance from community = degree of accessibility (close = accessible; far = inaccessible)

Size of institutional sphere = degree of influence or relevance (large = highly influential; small = influential)

Thickness of connector = degree of communication (thick = rich communication; thin = little communication)

Table 4 Organizations and development interventions in the research locations

Currently operational	Description
Agencia Agraria	Agencia Agraria de Noticias (Agrarian News Agency) aims to improve the circulation of agricultural knowledge and information in rural areas
Agrobanco	Agrobanco: Servicio Financieros para el Perú Rural (Financial Services for Rural Peru), created by Law No. 27603 and modified by Law No. 29064, is a domestic financial institution dedicated to lending in the agricultural sector. Particular emphasis is placed on agriculture, livestock, forestry, aquaculture, agro-industrial activities, and transformational processes such as the marketing and export of natural products derived from these activities.
Agrorural (Pronamachs)	Programa de Desarrollo Productivo Agrario Rural; subsidiary of the Ministry of Agriculture that aims to promote rural agricultural development through project financing and public investment in rural areas with low levels of economic development.
Cori Mina	Private mining company
Empresa Minera Buenaventura	Compañía de Minas Buenaventura S.A.A.; private mining company
FONCODES	Fondo to Cooperación para el Desarrollo Social (Cooperation Fund for Social Development); created by Supreme Decree in 1991, now a subsidiary of the Ministry of Development and Social Inclusion with the remit of investing in programmes of social development by focussing on the economic empowerment of rural households living in extreme poverty, and by emphasizing territorial forms of economic development.
Gobierno Distrital	District government
Gobierno Provincial	Provincial government
Gobierno Regional	Regional government
Grupo Voluntario Civil (GVC)	Voluntary Civil Society Organization
IMA	Instituto de Manejo de Agua y Medio Ambiente (Institute for the Management of Water and the Environment); a subsidiary project of the regional government of Cusco
IPID	Instituto Peruano de Investigación y Desarrollo (Peruvian Institute for Research and Development); civil society organization
Kuntur	Local CSO
MARENASS	Proyecto de Manejo de los Recursos Naturales en la Sierra Sur (Project for the Management of Natural Resources in the Sierra Sur); rural development project linked to IFAD (International Fund for Agricultural Development) and their other projects, such as Corredor Puno-Cusco (see below)
Ministerio de Agricultura	Ministry of Agriculture
Ministerio de Educación	Ministry of Education
Organización Club de Madres	Mother's Organization (local civil society organization)
PACC Peru	Programa de Adaptación al Cambio Climático (Programme for Adaptation to Climate Change); bi-lateral intervention supported by the Swiss Agency for Development and Cooperation

Currently operational	Description
Pension 65	Programa Nacional de Asistencia Solidaria (National Programme of Solidarity Assistance); new social safety net implemented by the Federal government in 2011, which unconditionally distributes 125 nuevo soles per month to citizens over the age of 65 years.
Plan International	International NGO
Programa Aliados	Programa de Apoyo a las Alianzas Rurales y Productivas de la Sierra (Programme for the Support for Rural Productive Partnerships in the Sierra Sur); Ministry of Agriculture project.
Programa Juntos	Programa Nacional de Apoyo Directo a los más Pobres (National Programme for Direct Help to the Most Poor); conditional cash transfer (CCT) scheme established in 2005 by Supreme Decree and governed by Ley N° 29792 and the Ministry of Development and Social Inclusion. The programme distributes 200 nuevo soles every two months to families on the condition that children are enrolled and attend school, and that expecting mothers and young babies (under 3) regularly attend approved health clinics.
PRONA	NGO focussed on improving food security
SENASA	Servicio Nacional de Sanidad Agraria del Perú (National Service for Agrarian Health); Affiliated to the Ministry of Agriculture; maintains a system of plant and animal health monitoring.
SICA (NGO)	NGO
Sierra Exportadora	Government institute dedicated to enhancing value-added production in the Andes in order to “supply efficiently the national and international market with highly competitive products, whose businesses are integrated into the Sierra and the global economy, generating a high standard of living among its inhabitants”.
Soluciones Prácticas/ITDG	International NGO
Wina Warma	NGO that works with youth.
Relevant formerly operational organizations	
Kawsay	Local NGO
Corredor Puno-Cusco	Proyecto de Desarrollo del Corredor Puno-Cusco; IFAD project to strengthen rural markets along the main roads in the corridor between Cusco and Puno; ended in 2006
MASAL	Proyecto Manejo Sostenible de Suelos y Agua en Laderas (Project for the Sustainable Soil and Water Management in the Mountains); bilateral programme supported by the Swiss Agency for Development Cooperation; involved with the training of <i>kamayoq</i> and <i>kamachiq</i> as part of Pachamama Raymi.
Caritas	Catholic development NGO
Solaris	Peruvian NGO that works with the rural poor.
IDA	Unknown

Nearby Langui is in a similar position to Layo; as the only remaining *kamayoq* in Langui, Pedro, lamented: “How I wish this partnership [with *kamayoq*-training NGOs] could be strengthened, that there could be one for all provinces, but unfortunately in the Andean highlands, they spend two years here and then they disappear from some districts, but in other districts they remain to do work with the *kamayoq*” (interview, January 2013). These differences are exacerbated by Soluciones Prácticas’ tendency to rely on what Bebbington (1998) described as islands of success and sustainability – pockets of programmatic success built on strong inter-institutional links and established working relationships with local groups. Soluciones Prácticas is generally reluctant to expand *kamayoq* training to municipalities lying adjacent to established programme areas, resulting in inter-municipal differences in institutional commitments (such as between the surplus of *kamayoq* in Kunturkanki and Checca, and the dearth in neighbouring municipalities of Langui and Layo). For Julia Hinostroza, a sea of poverty, exclusion, and marginalization surrounds these islands of success, and the refusal of Soluciones Prácticas to more evenly distribute its resources caused her to relinquish her position as manager of *Escuela de Kamayoq* (subsequently taking up a position within the Regional Government of Cusco) (interview, November 2012).

However, it is this consistent presence of Soluciones Prácticas that sees it occupy a large, central position in most of the diagrams; if the organization was to spread itself more thinly, how would this impact the success of its interventions? Indeed, it is generally NGOs and local and regional governments that occupy the most privileged positions in these diagrams, while interventions such as Programa Juntos, FONCONDES, and Pensión 65 remain small, distant spots on the horizon of the institutional context. These broad-sweeping government programmes are deemed relatively inconsequential by *kamayoq*; despite the additional income generally being gratefully accepted, their complaint was that these cash transfer and financial safety net schemes do little to affect productive capacity in the Sierra Sur – what use is a few hundred more soles per month if livestock continue to suffer from bad health and crops continue to fail? The *perceived* distance of these mechanism need not, however, be translated as total policy failure; as Peck & Theodore (2015) have illustrated, these kinds of mechanisms can evolve to produce progressive outcomes ‘on-the-ground’ despite having their origins in the distant offices of neoliberal policy-makers. Often, they argue, these mechanisms also travel with unforeseen (and indeed unseen) additional benefits, which in this case may be the arrival of new institutions delivering improved services to Andean communities.

In this sense, it is surprising that Sierra Exportadora occupies a position so distant and inconsequential to the *kamayoq* of Cotaruse (see the bottom left corner of **Figure 20**). Sierra Exportadora is a new multi-sectoral initiative to support value-added production in rural Peru; that is, to build capacity amongst *campesinos* to produce high-value products both for internal and external markets – capacity that these *campesinos* have long been longing for. It is, however, a relatively new endeavour, which – according to Luis Paz, an advisor to the institution’s executive presidency – receives just 1% of the budget of the Ministry of Agriculture and acts as a kind of catalyst for linking production chains and stimulating markets (interview, May 2013). Yet the cause for the dissonance between *kamayoq* and Sierra Exportadora may lie in the way in which the *kamayoq* are conceived within this programmatic attempt to transform the production and value chains of rural Peru. As Luis Paz explained, the *kamayoq* are an economically efficient tool for transforming production without resorting to the costly kinds of agricultural extension dismantled under the Presidency of Alberto Fujimori. His rudimentary neoliberal rationale cast the *kamayoq* as cheap, embedded experts working everyday to transform relations of production in the Andes.

Finally, the institutional diagrams point to the anomaly of Checca, where the institutional context is in fact relatively dense and not accurately portrayed by the results of this participatory research methodology. Nonetheless, the diagram does reveal the presence of relatively important and influential organizations; yet these organizations (with the exception of municipal government) are all perceived as relatively inaccessible and inconsequential. This perception may link back to the fact that Checca is the country’s eighth poorest district with an overall poverty incidence of nearly 95 per cent and an extreme poverty incidence of nearly 70 per cent. Moreover, as the conflict that emerged in the Checca focus group revealed (see chapter two), there appears to be a degree of distrust in external institutions, owing to mistreatment and what is perceived to be an exploitation of local resources, knowledge, and capacity. This contrasts the picture in Apurímac, where *kamayoq* appear to trust mining companies as important institutional actors in local development – another reflection of the contrasting contexts of development in these two regions, given the difference in the spatial distribution of mining concessions discussed above.

This uneven topography of *kamayoq* surpluses and shortages, and of varying institutional commitments, complicates the ways in which *kamayoq* might contribute to forms of territorial development in their regions: rather than building connections with surrounding communities

and municipalities in order to develop regionalized development plans, *kamayoq* remain bound by established institutional relations and normalized procedures of municipal governance, thereby deepening the spatial unevenness of development networks. The effects of this spatial patterning are not just inter-regional differences in numbers of *kamayoq* or the quality of development and training programmes. Over time, development programmes begin to affect local social divisions along axes such as class and gender. Indeed, Guillermo's acute sense of reflexivity hinted that the uneven effects of *kamayoq* training programmes are not only a product of the spatial patterning of NGO interventions: "Then they [Soluciones Prácticas] called a meeting, and from the eighty that went, now we are few" (interview, March 2013). His point was that while many *campesinos* attended the initial meetings hosted by Soluciones Prácticas, few pursued the programme to the point of becoming a *kamayoq*. These differences in expectations of NGOs and what it means to participate in development programmes eventually begin to map onto the local terrain.

"No man is a prophet in his own land" [sic]

The analysis so far in this chapter has charted the changing nature and role of the *kamayoq*, and the ways in which they fit within an uneven topography of development interventions. In this section, I elaborate on the role of *kamayoq* as *líderes* – as a network of agents liberated from the *community obligation* of knowledge (re)production but charged with the *responsibility* of leading-by-example. Exploring this theme brings the notion of differentiation down to the level of inter-group conflict within Andean communities and even to individual subjectivity.

In practice, the leadership role of *kamayoq* takes shape through two particular channels, both of which were identified by César (introduced earlier): "as leaders in a community...we answer the calls of the municipality or any institution. There we present ourselves and we propose what the community needs. We also participate in participatory budgeting, in popular assemblies, where we reach the authorities through dialogue" (interview, December 2012). These two scenarios – of professional representation within municipalities and influential agencies, and participation in collective forums of representation such as participatory budgets – come together in often contradictory and inconsistent ways, and they contribute to a social axis of differentiation among the *kamayoq*, as well as between *kamayoq* and other *campesinos*.

The first example reflects the recruitment of *kamayoq* as community-mobilizers and practitioners within local government and NGOs; *kamayoq* act as intermediaries – or perhaps more accurately as mediators (Latour, 1993) – between the municipalities and their surrounding communities, or between NGOs and their programme ‘beneficiaries’. Experienced *kamayoq* have also been recruited to re-produce the *kamayoq campesino-a-campesino* model itself, working for Soluciones Prácticas as facilitators of capacity-building and as evaluators in the IPEBA certification process. There is a sense that by combining the peer-to-peer training of other *campesinos* with formal representation within NGOs and local institutions, the *kamayoq* can forge the kind of socially agreed upon territorial development-with-identity alluded to by Schejtman (2009). As Paca Villanueva – manager of the community-based extension programme at Soluciones Prácticas – described it, “the *kamayos* are part of a local innovation system in which, as well as being skilled farmers, they are also social actors, and as such, also lead development processes within their communities” (interview, October 2012).

The second example points to the role of *kamayoq* in spaces of participatory rural governance, such as participatory budgets (*presupuestos participativos*). Participatory budgeting (PB) has been a legal mandate at the municipal level in Peru since 2003 (*Ley 27972*; *Ley 28056*), and is upheld by local technical teams that are established via an educational strategy of training and learning-by-doing, and which help to translate project ideas into feasible proposals (Hordijk, 2009). Nonetheless, implementation has been characterized by a lack of respect for agreements reached, poor implementation of prioritized projects, lack of capacity among rural municipalities, and the closing of autonomous deliberative space due to elite capture (Hordijk, 2009). The result – according to Silvio Vargas, who helped to set-up the local PB process in the municipality of Langui – is that proposed projects are not assessed on their merits, but rather according to the pre-determined conclusions of powerful decision-makers, such as locally appointed *dirigentes* (directors) and their allies at the provincial level (interview, January 2013).

These *dirigentes* are appointed by each municipality to oversee the PB. In rural areas, these *dirigentes* have ultimate control over which project proposals are advanced to the regional level and which are withheld, despite democratic (voting) processes designed to ensure otherwise. This position – and more importantly who occupies it – is arguably more influential than any of the prior consultative processes or the subsequent signatures from local

mayors, as these individuals reinforce their own elite networks while offering piecemeal clientelistic benefits to potential challengers. Despite the existence of national frameworks for governing participatory democracy – such as Mesa de Concertación para la Lucha contra la Pobreza (Roundtable for the Fight against Poverty) – local implementation struggles to overcome existing conditions of elite control patronage. Even the ‘minimum conditions’ for effective decentralization and local democracy therefore appear limited in their ability of overcoming how unequal power relations dominate the allocation of resources at the local level (see Bland (2011) for an account of these ‘minimum conditions’ in Latin America).

As Peck & Theodore (2015) have pointed out, it is perhaps unsurprising that PBs have failed to offer a radical solution to citizen participation: while born as a radicalizing project of “deep democracy” in Brazil, it has been mainstreamed by agencies like the World Bank and instrumentally adopted by “calculating politicians”, causing it to lose its critical edge. In Peru, PBs even emerged from the neoliberalizing projects of Alberto Fujimori, who instigated programmes of decentralizing before Toledo made PBs a municipal requirement. Like Bolivia’s LPP (*Ley de Participación Popular*; Law of Popular Participation), PBs in Peru have the opportunity to evolve from neoliberal origins into a potentially progressive form of citizenship and inclusion at the municipal level. Yet without addressing control by established elites and the *dirigentes*, greater stratification and exclusion is the current trend in Andean municipalities.

Given this context, the question arises as to whether *kamayoq* can provide a service similar to the technical teams described by Hordijk (2009). While still manager of *Escuela de Kamayoq*, Julia Hinostroza indicated that *kamayoq* were expected to “respond as leaders in participatory budgeting...to give proposals in an organized exchange and to present it to the municipalities and say ‘look, this is what we can do’” (interview, August 2011). More recently, this expected role has been inserted into the formal training processes associated with IPEBA certification, which includes two “transversal modules” on “planning for participatory budgets and local development” and “gender and leadership”, the combination of which is designed to encourage women *kamayoq* to take up positions as community-based leaders and to direct community processes of drafting plans for the PBs.

Despite this emphasis within both Soluciones Prácticas training and the IPEBA certification system, there is a general reluctance among *kamayoq* to take on such a political role: many stressed that their participation is not in the capacity of a *kamayoq*, but rather just

as “active members like anyone else” (focus group, February 2013). Others have pointed out that the leaders of local associations and *campesino* organizations hold more power and are more respected by the community in the PB process. Yet in this moment of selectively abandoning the mantra of ‘leading-by-example’, of retreating from their role as *líderes* when the implications are political, *kamayoq* are forgoing the opportunity to contribute to a socially agreed upon route to development at the municipal and regional scale. This contrasts Gary Bland’s (2014) account of how local politics has become the new arena for voicing social grievances, aided by the new opportunities afforded through participatory governance and dissatisfaction with government performance; if the local arena is a new site for collective action, then the *kamayoq* are not the individuals prompting or leading this process. Perhaps conscious of this tendency, Paca Villanueva shied away from promoting the political role of *kamayoq*, stripping them of their individual or collective potential to be political leaders:

We are not pointing to a form of political participation in that they can be future mayors or governors...[but] they can have a major share as interlocutors for peasant families... These experts are farmers who are technological leaders because they have a set of knowledge, expertise, and through a training process will have specialized capabilities to intervene in the field.

Nonetheless, emerging from the perceived upward mobility of *kamayoq* into positions of relative power and significance are new planes of social stratification between *kamayoq* and other (non-*kamayoq*) *campesinos*, and amongst the *kamayoq*. The former manifests in the everyday environment of community life, as *campesinos* have come to resent these new *kamayoq* bureaucrats for their privileged status, thereby reflecting the broader trend of professionalization leading to polarization (Mosse, 2005), and resuscitating César Fonseca’s notion of “power elites”. The socio-political affiliation of *kamayoq* with external experts has prompted perceptions of favouritism and a counter-reaction from community members, who ask: “if you are my equal, and we have grown up together as commoners, how is it that the community selects and privileges you to receive this education project”? Consequently, some *campesinos* have begun rejecting the idea of the *kamayoq*, arguing that they “do not practice what they preach’ or “do not show them by example”; others stressed that the *kamayoq* are no longer embedded in the communities and that they “do not share their knowledge, they only learned it for their own benefit”.

Despite being respected and increasingly employed by municipalities, NGOs, and national government institutes such as IPEBA, *kamayoq* are therefore becoming a focus of resentment

amongst the broader *campesino* population. As one *kamayoq* put it to me, “no-one is a prophet in his [*sic*] own land”: to gain the respect historically associated with being a *kamayoq*, they now have to look beyond their immediate community. This fissure has emerged despite *Escuela de Kamayoq* initially including a clause that for an individual to participate, s/he must have the approval of the community assembly (de la Torre Postigo, 2004) – a clause that seems to have been waved in Soluciones Prácticas’ desire to scale-up its centre of agricultural innovation with the *kamayoq* at the centre.

The proliferating programmes of *kamayoq* professionalization are also contributing to a division amongst the *kamayoq*, not least since a distinction has emerged between the new *kamayoq* bureaucrats working for NGOs and municipalities, and the majority of *kamayoq* who remain focused on communicating livelihood improvements in the field. The upwardly mobile *kamayoq* see their new roles as part of their responsibility as leaders; the *kamayoq* who remain dedicated to the direct process of *campesino-a-campesino* knowledge sharing regard the former’s use of *kamayoq* status as an abandonment of the *kamayoq* ideal. This rift has become articulated by internal conflict within associations of *kamayoq*, with the *Asociación Toribio Quispe Jallo* losing members due to problems of unequal power and uneven representation due to elite capture. Similarly, the *Kunturkanki Association* suspended its activities due a deadlock among competing powerful members. (I return to the theme of *kamayoq* associations in more detail in chapter six.)

Unfortunately, the uneven terrain of professionalizing *kamayoq* via government and non-government programmes also exacerbates this rift within the collective identity of the *kamayoq*. Until recently, the two organizations approved by IPEBA to award formal certificates to *kamayoq* were Soluciones Prácticas and AMARKAS (*Asociación Macro-Regional de los Kamayoq del Sur*) – a regional association of *kamayoq*, consisting of a dozen local *kamayoq* associations from the departments of Cusco, Puno, Arequipa, and Apurímac. AMARKAS acts a unifying body in developing a macro-regional approach to providing training services and technical assistance to rural farmers. The participating local *kamayoq* associations meet on an annual basis to develop the strategic vision of AMARKAS, often inviting the technical assistance of NGOs such as Soluciones Prácticas and programmes such as Project MASAL. AMARKAS is also linked to other regional initiatives such as the Community Education Network (La Red de Comunicación Comunitaria) and its local partners, as well as to various sectors of Regional Governments.

According to AMARKAS President Felicitas Pucho Mamani, however, IPEBA has favoured Soluciones Prácticas as a certifying body due to its institutional connections and experience in training a particular breed of *kamayoq* (interview, February 2013). Such a strong presence by Soluciones Prácticas is creating a split amongst *kamayoq*; while AMARKAS favours a unified approach to training and certifying *kamayoq*, Soluciones Prácticas has continued to scale-up its certification programme in its key programmatic locations. Conversations with *kamayoq* trained and certified by AMARKAS revealed a togetherness around Andean culture and knowledge production, which contrasts the discourse of professionalization and employability voiced by many *kamayoq* associated with Soluciones Prácticas. Ultimately, this difficult implementation environment led IPEBA to retract their approval of AMARKAS as a certifying body, prompting a rift internal that saw AMARKAS divide into two new associations that will now compete for new alliances and affiliations among the *kamayoq*.

Finally, there is the often-invisible dimension of gendered difference among the *kamayoq*. Soluciones Prácticas has rightly pointed out that the process of training women *kamayoq* can have a positive impact on the gendered dynamics of Andean households and communities. As the numbers of women participating in *kamayoq* training continues to increase, the kind of “subjectification effects” alluded to by Valdivia (2009) may increasingly amplify, as political participation and education shift power relations between men and women in a way that opens up new spaces of household decision-making and as well as social positions of responsibility and power for women. In the case of the *kamayoq*, however, increased numbers have not yet translated into a broader shift in power relations: men still control the direction of capacity-building and training scenarios; men still dominate local politics; and men still make up the majority of *kamayoq* to have reached positions of employment or to be called upon to represent the *kamayoq* in political arenas. Rather than a reflection of absolute numbers (of attendees at general assemblies, for example), this domination is largely felt in terms of the prevalence of male voices over female voices, and of the influence that these male voices have over political outcomes. While women attend assemblies in large numbers, they often remain silent – a historical product of their structural position in Andean decision-making scenarios. Male representatives also uniformly fill senior positions in local municipalities. There are, of course, exceptions: Ascencia, for example, has dedicated herself to exposing the issue of women’s exclusion, and has travelled to Bolivia to promoting the training of women *kamayoq*.

Nonetheless, even amongst the *kamayoq*, women are continuously undermined in their political endeavours: the split in AMARKAS, for example, emerged in the form of an attempted coup, as a powerful male member sought to overthrow Felicitas.

Conclusion

In this chapter, I positioned *kamayoq* phenomenon within contemporary trends of development, such as the participatory turn and ‘farmer first’. I also located the *kamayoq* within an unfolding ethnodevelopment paradigm, identifying the creation of ‘ethnic expertise’ and positioned the *kamayoq* as ethnic experts within debates around the functioning of Andean households. I pointed to the conflicting role that the *kamayoq* currently play in shaping rural development in the Andes at the community scale. First, the incorporation of *kamayoq* within formal development programmes is affecting their role in the reproduction of Andean knowledge, as these programmes carry the unintended effect of replacing the dynamic forms of knowledge embodied in *aprender hacer* with static forms of knowledge-on-display (*saber hacer*). Second, this shift in knowledge reproduction and the ways in which *kamayoq* help to structure rural development is unfolding according to the uneven spatial politics of development interventions, creating a patchwork of ‘islands of success’ amongst a ‘sea of poverty’. Third, both of these trends are having an effect on the cultural identities and political positions of the *kamayoq*, as their traditional position of a respected community member is being eroded while their political role as leaders is being emphasized – and yet not substantively supported – by development NGOs.

It appears, then, that the *kamayoq* have been revived and instrumentally incorporated within a broader ethnodevelopment paradigm that is particular to the Sierra Sur. In combination with chapter three, this chapter has shed light on the institutional functioning of the *kamayoq* by paying attention to inter-household forms of cooperation and the ways in which underpinning social relations function as exchange relationships that are conditioned both by localized histories of *kamayoq* in practice and the globalized inter-connections of the ethnodevelopment constellation. Enrique Mayer (2002) argued that these kinds of relationships enable a degree of manoeuvre and choice on the part of the individual actor, but within contexts of established norms that regulate such choices. The institutionalized relations therefore establish how the rules of the game are to be played, regulating transactions

according to collectively established cultural norms, but allowing room for the pursuit of personal interest.

In this chapter I illustrated how particular combinations of community-level cooperation and personal interest currently shape the dynamics of Andean life. As *kamayoyq* increasingly form part of institutionalized sets of relations that are introduced by NGOs and supported by municipalities, so they appear to be shifting their responsibilities further away from community cooperation and towards personal gain. Thus a picture begins to appear that depicts the two-fold demand on individual interests: on the one hand, there are the demands of participating as members of cooperative communities within particular production zones (which therefore have particular production needs, and each *campesino* attempts to ensure that his/her own is attended to); on the other hand, there are broader demands that transcend the local village, as *campesinos* are pulled into relation with shifting structural conditions (such as through employment in mines) (Mayer, 2002).

Despite these conclusions, however, as I later explore the *kamayoyq* still offer potential ways of re-valuing Andean cultural values and practices, including by upholding combinations of forms of political-economic integration that do not succumb to the generalized shifts towards neoliberal, resource-dependent economies in the region. How, then, might Soluciones Prácticas re-orient its interventions with the *kamayoyq* in order to support this more progressive potential? Quechua is currently used as a delivery *means* rather than as a signifier for more embedded and historically engrained understandings of the practical knowledge being shared (or indeed put on display) by the *kamayoyq*. Yet culture is not simply an empty signifier here: the methodology relies on the cultural underpinnings of the *kamayoyq*; without these underpinnings, the *kamayoyq* would not have garnered the community-level respect with which they began. The difficulty, now, is to tackle the social divisions that are emerging in the wake of this proliferating model.

For organizations like Soluciones Prácticas, it would therefore be worth developing a slower, reflexive overview of the programme to address issues of cultural affirmation, in addition to supporting technical fixes to immediate livelihood issues. Too often their reports and assessments are steeped in these technical evaluations (thereby “rendering technical” (T. M. Li, 2007) the *kamayoyq*), leaving social and political effects unaccounted for. Those who have attempted to highlight these limitations have found themselves outside of the sphere of influence – as both Raul Ho and Julia Hinostroza testified. If Soluciones Prácticas were to re-

visit their original formulation of the *kamayoq campesino-a-campesino* model, they would perhaps heed Julia Hinostroza warning: their continued involvement in some locations is deepening divisions, just as their lack of involvement elsewhere leaves gaping holes in service provision. Interestingly, the *kamayoq* model is in fact being rolled-out to new places, but this is happening via a rapid intensification of the programme decreasingly under the control of Soluciones Prácticas.

In the chapters that follow, I take up this evolution of the position of *kamayoq* in the ethnodevelopment constellation. I further unravel the ‘structural coupling’ of the *kamayoq* to recent shift in broader environments (Escobar, 2008). In chapter six, I revisit the overlap between Polanyi’s forms of economic integration and the ‘sacred’ Andean values of reciprocity, collectivism, and communal ownership. First, however, I locate the *kamayoq* in relation to a recently introduced national programme of certification (and indigenous professionalization) governed by IPEBA – a government institute responsible for establishing and upholding and evaluating a series of vocational educational standards in the country. This case reveals how the professionalization of the *kamayoq* is accompanied with a transformation of ethnic expertise into a form of ethnic entrepreneurship.

FIVE

CREATING ETHNO-ENTREPRENEURIAL SUBJECTS: INTERCULTURAL EDUCATION, KNOWLEDGE CERTIFICATION, AND THE PROFESSIONALIZATION OF THE *KAMAYOQ*

In previous chapters I positioned the *kamayoyq* within a globalized development constellation that takes shape in Peru through particular articulations of a proliferating ethnodevelopment paradigm. I also explored the shifting historical position of the *kamayoyq* and their role in shaping political-economic integration across space and time (thereby countering the instrumental incorporation of indigenous social practices within ethnodevelopment paradigms simply by virtue of their pre-Hispanic origins). In chapter four, I uncovered the contested meanings and political manifestations that have resulted from contemporary programmes engaged in re-establishing *kamayoyq* as ‘ethnic experts’ charged with acting as leaders in community development.

In this chapter, I explore the professionalization of the *kamayoyq* via a programme of certification recently introduced by the Peruvian national government, which I contextualise within scholarly debates around indigenous professionalization, adult inter-cultural education, and ethnic entrepreneurship. At the centre of the programme is the process of certifying the ‘competency’ of *kamayoyq* according to a series of spatially (and somewhat temporally) normalized indicators of (practical) knowledge – a process that acts as a *dispositif* in conducting the conduct of the *kamayoyq*. I document how this programme has unfolded according to a national discursive strategy that revolves around adult intercultural education, improved production chains and market systems, a ‘new rurality’, and decentralization. The effect is a transformation of the *kamayoyq* from the ethnic experts of development programmes, to entrepreneurial subjects instilled with the capabilities of leading communities by their own examples of employability, market integration, and upward mobility. The analysis therefore illustrates how the *kamayoyq* have been re-incorporated within hierarchically organized state

structures of governing agricultural production and knowledge in the Andes. I show how the certification endeavour is a project implemented with good intentions, but which has spiralled *inwards* towards the state as a revitalized actor in the governance of knowledge and education. I therefore explore the links between a the re-institutionalizing processes of a revitalized Peruvian state, the development aspirations of transnational NGOs, and the knowledge, education, livelihood, and governance needs of the *kamayoq* as a collective of indigenous individuals increasingly expected to take on ‘culturally appropriate’ professional roles. I contrast the model of intercultural education developed through this programme to the kind *diálogo de saberes* promoted by organizations such as PRATEC.

The reinsertion of the *kamayoq* into these state structures began in 2010, when the government institute known as IPEBA – the Peruvian Institute for the Evaluation, Accreditation, and Certification of the quality of Basic Education – introduced a national system for certifying the ‘competency’ of livestock promoters.⁸⁰ This competency level is measured according to a series of ‘functional maps’ that determine the sectors and sub-sectors of production within which the promoters operate, and a related list of knowledge indicators (*normas de competencia*; literally ‘competency norms’) that establish the standards by which the livestock promoters must adhere. As I explain in this chapter, the purposes and effects of this system are multifaceted, but it relies on an increasingly dense institutional hierarchy, both to determine these functional maps and knowledge indicators, and to assess livestock promoters according to the established standards.

This hierarchy, and the standards it upholds, is being universally applied across Peru; in IPEBA’s terms it has been ‘normalized’, meaning that livestock promoters in the northern department of Cajamarca (where the term ‘*kamayoq*’ carries little cultural or historical resonance) are subject to examination according to the same knowledge indicators and standards as the *kamayoq* in the Sierra Sur. To acquire this IPEBA-stamped certificate for a particular ‘module’ (or sub-sector of production, such as animal health), each candidate must complete a year-long training programme with an approved institute, known as a ‘certifying body’. After completing this training, the candidate is assessed – by a team of evaluators contracted by the certifying body – on the practical implementation of the acquired knowledge

⁸⁰ IPEBA stands for *Instituto Peruano de Evaluación, Acreditación y Certificación de la Calidad de Educación Básica*.

and skills, and in relation to the functional maps, knowledge indicators, and standards established by IPEBA. Upon successful completion, the candidate receives an IPEBA-approved certificate for the particular module or sub-sector, such as animal health, animal nutrition, pasture management, etc.

From the moment that the pilot project laid the ground for the national roll-out of this certification system, the *kamayoq* have played a central role, not just as a target population for training and awarding certificates, but also in shaping the evolution of the system through successive rounds of participation (in *mesas técnicas*, or ‘technical roundtables’). In this chapter, I explore the links between the *kamayoq* and the national certification system, revealing the complex rationales, processes, and effects that have emerged – and which will continue to evolve – since its introduction in 2010. This chapter is therefore a sympathetic critique of the IPEBA endeavour. Within the IPEBA *dispositif*, knowledge is defined and prescribed according to frameworks and indicators. Practitioners of knowledge must conform to these prescriptions, and once they have their certificates they are encouraged to enter the labour force, thereby enhancing Peru’s productivity and competitiveness.⁸¹ I begin, however, by revisiting the concept of ethnodevelopment, exploring its relation to the notions of intercultural education and indigenous professionalization.

Ethnodevelopment, intercultural education, and the professionalization of indigenous subjects

In this chapter, I explore the intersection of the two ethnodevelopment paradigms outlined in chapter two, paying particular attention to how education and professionalization reflect both the entrepreneurial inflections of the first instrumentalizing paradigm, *and* the cross-cultural, multi-scalar relations that underpin a second paradigm that is based on plural understandings of culture as creativity (Andolina et al., 2009). In the Peruvian context, María Elena García (2005a) has illustrated how the first ethnodevelopment paradigm is historically tied to the specific context of *Indigenismo* – an urban literary movement that emerged during the mid-

⁸¹ The critique presented in this chapter is distinct from a critique of education syllabi in general. The normalized standards and knowledge indicators established as part of the IPEBA model are not a guide for learning, but rather a checklist for performance. The *kamayoq* *must* demonstrate their abilities in line with each of the performance indicators for each function and fulfillment. It is a black and white scenario: a *kamayoq* meets or does not meet IPEBA’s standards; certificate or no certificate.

nineteenth century before being popularized in political debate during the 1920s, largely as a result of the works of José Mariátegui and his formulation of “the Indian problem”.⁸² Mariátegui saw the persistence of ‘communist’ Andean traditions and located the ‘Indian problem’ as one of economic rather than cultural integration (as it was tied to the colonial legacy of feudal landholding) (García, 2005a). Prior to the 1930s, however, *Indigenismo* was not identifiable as a particular discipline and the literary and political agendas were indistinguishable. While political *Indigenismo* adopts the term ‘indigenous’ as a metonym for peasant, literary *Indigenismo* uses it as a metonym for autochthonous (Archibald, 2011). While the latter unravelled into descriptive essentialisms, the former set the scene for nearly a century of struggle between the *campesinos* of the highlands and Amazonian basin, and the *mestizo* political class of the urban and coastal areas.

By the 1980s, the popularized implications of *Indigenismo* were being put to full force by the Maoist insurgent movement, the Shining Path of José Carlos Mariátegui, which took its name from the *Indigenista* scholar.⁸³ As the Mariátegui symbolism faded and the Shining Path embraced their Maoist strategies of insurgencies, so *campesino* communities also organized to defend their own sense of indigenous identity and autonomy. As Orin Starn (1999) pointed out, the resulting *rondas campesinas* (peasant rounds) have played an important role in discussions of indigenous rights and politics, despite often being labelled as complicit in the violence that subsumed the Andes. Yet in popularized accounts, their role is often subordinate to that of Alberto Fujimori, whose inauguration in 1990 marked the beginning of the end for the Shining Path (whose leader, Abimael Guzman, was captured in 1992), the introduction of aggressive neoliberal restructuring policies, and a shift in political articulations of indigeneity. In addition to flying to the Andes to ‘dance with the peasants’ and hand out gifts (Mayer, 2009), Fujimori would bring thousands of peasants into Lima every year to participate in Independence days parades, presenting them as ‘soldiers’ who had fought against the insurgents (García, 2005a). Yet this performance of indigenous inclusion shrouded the darker side of instrumentally categorizing what it meant to be an indigenous peasant – a darker side that paradoxically opened the doors to new conversations in indigenous politics:

⁸² For detailed accounts of *Indigenismo*, the ‘Indian problem’, and Mariátegui’s influence, see Garcia (2005b), Archibald (2011), de la Cadena (2000), and/or Lucero (2003, 2008).

⁸³ While the Shining Path is well known for the grip it held over the Andes in the 1980s, there were also other groups, such as the Tupac Amaru Revolutionary Movement (MRTA).

Despite the dangers, intercultural activists recognized the changing political climate as an opportunity for advocacy... the changing national political context, as well as the influence of international organizations, opened new spaces for working toward intercultural programs. Yet these new spaces were also filled by the contradiction inherent in the Peruvian state's attempt to validate cultural difference while also seeking to control the social dangers associated with that difference (García, 2005a, p. 50).

While Fujimori approved some progressive changes to the Peruvian constitution – including guarantees for indigenous rights, obligations for intercultural and bilingual education, and respect for cultural identity – he also dissolved the National Office for Bilingual education and dismantled much of the state apparatus for supporting rural communities. A subsequent ‘boomerang effect’ took the form of increased pressure from international groups, and by the time of Fujimori’s disgraced exit from the country in 2000, space had opened up for a revival of indigenous political issues.⁸⁴ As head of the interim government (2000-2001), Valentín Paniagua launched the Truth and Reconciliation Commission, which was advanced by his successor, Alejandro Toledo (2001-2006). Toledo successfully sparked a period of reform in Peruvian education that has continued – under both Alan García (2006-2011) and Ollanta Humala (2011-present) – to promote intercultural and bilingual education. In María Elena García’s assessment, these educational reforms reflect just a first step in a positive legal-institutional shift:

Intercultural Bilingual Education holds the promise of a more equitable, diverse, and respectful society. Its proper implementation is a pledge to eradicating poverty in indigenous communities, while simultaneously promoting indigenous autonomy, cultural pride, and demanding social, cultural, economic and political rights. However...there is still much work to be done (García, 2005b, p. 28).

In this chapter, however, I explore how intercultural and bilingual education can also serve as a Trojan Horse for other forms multicultural governmentality associated with the neoliberal state. These forms emerge through the marriage of intercultural education with top-down programmes of indigenous professionalization. In exploring indigenous higher education programmes in Bolivia and Ecuador, Laurie, Radcliffe, and Andolina (2005) have argued that indigenous professionalization programmes carry a challenge to neoliberal and multicultural spaces of governmentality. While this analysis might contrast the case of top-down reforms in Peru, their treatment of how popular education emphasizes indigenous

⁸⁴ Fujimori’s spy chief, Vladimiro Montesinos, was filmed bribing a number of politicians; both fled the country.

knowledge serves as a useful precedent for understanding the recently introduced Peruvian programme of certifying the *kamayoq* and other indigenous peer-to-peer educators.

Laurie et al. (2005, pp. 470, 472) focussed on the “relationship between the institutions of ethnodevelopment and the creation of indigenous experts”, looking to uncover how professionalization creates spaces of ‘development-with-identity’ and establishes the basis for “creative thinking outside the standard ‘box’ of development solutions”. In their account, the transnational networks of indigenous groups have institutionalized into hybrid development institutions and educational consortia that have opened up livelihood options and professionalization to all indigenous groups, thereby helping to overcome conditions of indigenous conformity and performativity. “Culturally appropriate professionalization”, they argue, “recognizes indigenous values and knowledges, and seeks to strengthen indigenous political structures, organizations, and leadership” (Laurie et al., 2005, pp. 477-478), thereby breaking down dichotomies of western and indigenous knowledge. They even briefly alluded to the role that agricultural extension has played in Andean development, particularly when linked to NGOs that promote Paulo Freire’s pedagogical models of popular education – a context I take up later in this chapter. Ultimately, as they later concluded, “the institutionalization of indigenous professionalization challenges state forms of governmentality in relation to education” (Andolina et al., 2009, p. 160).

In the Peruvian case, the question remains as to whether the institutionalization of indigenous professionalization challenges state forms of governmentality by creating spaces for reworking power relations, or whether professionalization is used to confine indigenous populations to governable spaces created by the racial projects of the state. These projects entail the invention and re-invention of tradition, knowledge, representation, culture, territory, and resources (Watts, 2003). The resulting governable spaces emerge from indigenous-state interactions are neither homogenous nor universal; each has its own topology. Andolina et al. (2009) addressed this diversity in the sense that new forms of professionalization have been forged through a variety of sometimes accommodating, sometimes conflicting networked interactions that have struggled to achieve acceptable forms of governance for either neoliberal development advocates or indigenous groups and movements. Yet still lacking from accounts of professionalization, they argue, is an attentiveness to how “indigenous professionalization is forged through transnational practices that, in turn, circumscribe state-

indigenous relationships while shaping national and regional identity projects” (Andolina et al., 2009, p. 158).

In this chapter, I address this issue by exploring the links between a the re-institutionalizing processes of a revitalized Peruvian state, the development aspirations of transnational NGOs, and the knowledge, education, livelihood, and governance needs of the *kamayoq* as a collective of indigenous individuals increasingly expected to take on “culturally appropriate professional roles... [which] may be incompatible with the demands of indigenous leadership” (Andolina et al., 2009, p. 169). This approach points to an alternative view of professionalized indigenous actors, as their ‘ethnic expertise’ enables them to enter a newly emerging class of “ethnic entrepreneurs” who embody their own set of multi-scalar relations. Monica deHart (2010) has explored the politics of recognition that is enacted by the neoliberal multicultural state, and which actively constructs these ethnic entrepreneurs. Indigenous community members themselves – as individuals – became visible as legitimate development agents that embody the localized, participatory, and enterprising cultural forms that newly emerging global development norms sought to build and reproduce. The ‘ethnic entrepreneur’ emerged from and embodies the forms of knowledge and authority that have historically been marginalized, but have recently come to the fore as valuable tools for enticing self-enterprising, self-sustaining development processes. All of these factors produce new forms of visibility and variable effects for differentially situated ethnic subjects, establishing multi-scalar ‘regimes of living’ and ethnic communities (DeHart, 2010).

Bringing deHart’s analysis into the frame of ethnodevelopment therefore forces us to link intercultural and bilingual educational reform in Peru to the proliferating government and non-government programmes of indigenous professionalization, as well as to the resulting commodification of ‘ethnic expertise’ that underpins the emergence of new entrepreneurial subjects. Such a framework, however, runs counter to the kinds of plural, decolonial forms of intercultural education advocated by organizations such as PRATEC. This decolonial option of intercultural education is underpinned by the process of *iskay yachay* – the reciprocal exchange of multiple knowledges also encapsulated by the terms *diálogo de saberes* (dialogue of knowledges) and *minka de saberes* (reciprocity of knowledges) (PRATEC, 2012; Rengifo Vasquez, 2008b).

These forms of learning and doing are vital, according to Grimaldo Rengifo (2008a), for overcoming the crisis of school and community – the crisis of the opposition between the

colonial imposition of educational structures and Andean concepts of knowledge. As a concept of knowledge in movement, *iskay yachay* reflects the cultivation of a form cultural diversity in educational practice that directly challenges the failings of a Western education model based on science and technology, and as promulgated by the post-colonial Peruvian state and global development institutions such as UNESCO (see **Table 5**).⁸⁵ *Iskay yachay* helps to re-build autonomous capacity for learning in the Andes, establishing a basis upon which to escape Euro-centric teleological models of knowledge progress. This basis re-emphasizes the process-oriented nature of Andean knowledge, working on the basis of ‘learning how to do’ and dynamic co-existence. Cultural diversity is therefore the central pillar of *iskay yachay*, which in challenging Eurocentric and Imperialist forms of education does not aim to simply overthrow and displace these forms. Rather, emphasis is on cultivating a diversity of cognitive traditions, of instigating “a profound change in the convictions that surround a ‘good life’ [*vida buena*] and of the whole ideology behind modern nation states and institutions that structure Andean communities” (Rengifo Vasquez, 2008a, p. 27, my translation).

Exploring the role of the *kamayoq* within the context of intercultural education and indigenous professionalization, therefore raises the question of where the IPEBA model fits in this formulation of instrumental and governmental structures of education, on the one hand, and the culturally diverse, decolonial options of *iskay yachay*, on the other. Given the horizontal, peer-to-peer role of the *kamayoq*, they are well placed to support the forms of cultural revaluation proposed by the likes of Grimaldo Rengifo. What are the implications, however, of incorporating the *kamayoq* the state-driven processes of educational reform? *Soluciones Prácticas* navigates this terrain by locating the *kamayoq* within the teachings of Brazilian philosopher Paulo Freire, whose teachings match some of Rengifo’s (for example, the emphasis on diversity and plurality, rather than an overthrow of one educational order for another). To begin exploring this terrain, therefore, I re-evaluate the position of the *kamayoq*, shifting from their role in agricultural extension programmes and connecting Andean household economies (which I explored in chapter four), to the ways in which they are conceived as ‘culturally appropriate’ advocates within horizontal or popular forms of non-formalized education associated with the ideas of Paulo Freire.

⁸⁵ The United Nations Educational, Scientific, and Cultural Organization

Table 5 Contrasting models of education and development (compiled and translated from: Rengifo Vasquez, 2008a, pp. 14, 27)

Criteria	Model: rural modernization and cultural assimilation (Eurocentrism)	Model: proposal of cultural diversity
Vision	Progress and modern life The ideal of a good life according to industrialized countries	Affirmation of cultural diversity and diverse modes of the good life
Mission	Education for progress and development Improvement and the neglect of traditions	Recuperation of respect in all its expressions: human, natural, and deities
Contents	Science and technology	Plurality of knowledges: science and technology; and local knowledges Teaching of agrarian lifeways
Role of the educator	Agent of change	Cultivator of cultural diversity
Role of the community	Passive: receptor of the mission of the school	Active: the educational culture of the community as the nucleus of the educational process
Role of the school	Engine of development	State educational structure as incremented upon the educational culture of the community
Privileged language	Writing	Speaking and writing
Space of realization	The city and industry	The peasant life (<i>la vida campesina</i>)
Local knowledge	Invisible	Revalued

Re-positioning *kamayoq*: the ‘pedagogy of the oppressed’ and indigenous professionalization as a *dispositif*

“Guided by the pedagogical approach of Paulo Freire”, Carlos de la Torre explained, “ITDG [now Soluciones Prácticas] took great care to ensure that the *kamayoq* did not simply become promoters of the technologies available in the market. Rather, the aim was to promote alternative and appropriate technologies, the *kamayoq* were to work with peasant farmers in generating creative solutions to real problems of local agricultural production. This is a process known as Participatory Technology Development” (de la Torre Postigo, 2004, p. 11). There are many overlapping sentiments in this extract from the introduction to de la Torre’s book, which charted the evolution of the *campesino-a-campesino* model and the re-institutionalization of the *kamayoq* within the development programmes of Soluciones Prácticas. By positioning the *kamayoq* in relation to Paulo Freire’s model of popular education, without precisely delineating this model or how the *kamayoq* fit within it, de la

Torre achieved two purposes simultaneously. First, he reproduced the broader organizational position within Soluciones Prácticas (and Practical Action, internationally) of aligning itself with the ‘radical pedagogy’ of the Brazilian educational philosopher; second, in doing so he created the opportunity to read the case of the *kamayog* not just in terms of agricultural extension, but as an example of an empowering horizontal form of ‘liberation’ from Western forms of education and development.

Ultimately, however, the equation of Freire’s work to the notion of participatory technology development (PTD) signals a limited engagement with a Freire’s radical pedagogy (which perhaps reflects the intended readership of the book: development practitioners rather than educational philosophers). If the *kamayog* are to function within a Freirian radical pedagogy, it is worth establishing the degree to which they provide the “instruments of liberation” capable of displacing the “instruments of oppression” that have existed until now, thereby establishing a “pedagogy of the oppressed” that displaces the “banking model” of Western education (whereby students are deemed empty vessels to be filled with the knowledge imparted upon them by teachers). For Freire, the individuals oppressed by the banking model must “wage the struggle to resolve the contradiction in which they are caught”, since the oppressive class cannot merely reverse the terms of this contradiction by simply “changing poles” (Freire, 2005, p. 56). The ‘adhesion’ of the oppressed to the oppressor (which can be conscious or subconscious) can only be challenged by ‘educational projects’ that are organized by the oppressed (rather than through systematic education, which can only be changed by ‘political powers’) (Freire, 2005). As I explain in this chapter, however, the distinction between the political powers that reform systematic education and the educational projects organized by the oppressed is not always easily discernable, either in practice or as an ideal.

The “pedagogy of the oppressed” is not about *oppressive* pedagogy, but rather a kind of pedagogy defined, established, and governed by the formerly oppressed. According to Freire, there are two distinct stages: first, the oppressed commit themselves to a praxis of transformation; second, with this transformation in place, the pedagogy becomes that “of all people in the process of permanent liberation” (Freire, 2005, p. 55). Following a kind of Gramscian perspective on education, Freire argued that the first stage confronts pedagogical *consciousness*, while the second establishes a new educational *practice*. A crucial component to advancing between these stages is moving beyond dialogue as a mere technique, to

conceive of dialogue as “an indispensable component of the process of both learning and knowing” (Freire & Macedo, 1995, p. 379). If dialogue underpins social relationships of knowing and learning in general (i.e. beyond the classroom) how might the *kamayoq* meet some of Freire’s characteristics of a radical pedagogy? Freire almost answered this question himself when he pointed to the “problem-posing method” and how it could be applied to adult education in rural contexts. At the heart of this method is the role of the ‘dialogical teacher’:

The task of the dialogical teacher in an interdisciplinary team working on the thematic universe revealed by their investigation is to ‘re-present’ that universe to the people from whom she or he first received it – and ‘re-present’ it not as a lecture, but as a problem (Freire, 2005, pp. 109-110).

The parallels to the *campesino-a-campesino* model – including its recent insertion into the national programme of certification governed by IPEBA – are striking, given that the *kamayoq* re-present the already familiar *campesino* world according to a problem-solving rationale. The question remains, however, as to whether this constitutes a liberating praxis, which Freire argued must be de-ideologizing. Departing from Gramsci somewhat, “the object of dialogical action”, he argued, “is to make it possible for the oppressed, by perceiving their adhesion [to the oppressive banking mode], to opt to transform an unjust reality” (Freire, 2005, p. 174). Thus, a key question is whether the *kamayoq*, and the IPEBA system of knowledge certification within which they increasingly operate, support the generation of critical and reflexive forms of awareness that might contribute to a transformation in the unjust reality of uneven knowledge production and dissemination. Such a critical awareness might help to produce among the *kamayoq* an impetus towards the kind of culturally diverse and plural forms of education proposed by Grimaldo Rengifo (2008a, 2008b) and PRATEC (2012), rather than simply to reproduce the technical approaches imported by (largely) extra-local organizations such as Soluciones Prácticas.

In what follows, however, I suggest that the IPEBA system gives the appearance of dialogue, and yet reflects an attempt to re-orient the *campesino-a-campesino* model so as to prevent a potential challenge to prevailing educational norms in Peru (which, in reality, are a combination of Freire’s ‘banking’ system and other more horizontal forms of dialogue). To explore this proposition, I argue that while the *kamayoq* have explicitly been positioned in relation to Freire’s radical pedagogy, their inclusion within national knowledge certification programmes may more accurately reflect Foucault’s notion of a governmental *dispositif*, as the

insertion of indigenous knowledge within the IPEBA system acts as a technique of conducting the conduct of Andean populations.

My approach follows, somewhat, in the paths of Mario Blaser and Paul Nadasdy. The former has illustrated how participatory frameworks for including indigenous knowledge act as post-disciplinary techniques of control, which simultaneously promote carefully bounded notions of grassroots autonomy and generate conditions that subvert it. “Indigenous cultures”, he explained (2009b, p. 192), “have been put under siege by ‘educational programmes’ to transform them into ‘never-quite-perfect’ replicas of the European educated elites, [which is deemed] the only way to be accepted as citizens contributing to the development of the country”. The neoliberal state therefore creates the conditions for the *self*-imposition of hegemonic Western norms and practices associated with development (Blaser, 2009a). Paul Nadasdy similarly argued that the idea of integrating indigenous knowledge relies on the assumption that the cultural beliefs and practices referred to as such conform to western ideas about ‘knowledge’, treating indigenous epistemologies as a new form of ‘data’. From a Foucauldian perspective, this process conducts the conduct of indigenous people, as they are forced to express themselves in ways that conform to the institutions and practices of state management rather than to their own beliefs, values, and practices (Nadasdy, 1999, 2005).

Both of these processes therefore build on Foucault’s perspectives on disciplinary conduct. Although Foucault seldom addressed education directly (Deacon, 2005b), he did address the role of education institutions, arguing that they reflect the management of others and the teaching of those others to manage themselves. Moreover, those institutions revolve around a ‘rising elite’ that is distinguished by education and technical merit, and yet tied to the central governing agencies that reproduce the same education institutions (Deacon, 2003). That is, education reproduces itself by managing its subjects and reproducing a governing class that seeks to maintain the status quo. However, Foucault’s treatment of education institutions, which emphasized human capacities, communication, and power relations, applied mostly to schools and universities (Deacon, 2005a). Thus to understand the role of systems of certification and the creation of standards, I follow Laura Silva-Castañeda by drawing on the notion of *dispositif* to address the more diffuse ways in which technologies of power condition the pedagogical relations outlined by Freire.

Although often translated as ‘apparatus’, Foucault used *dispositif* more openly to refer to a network of heterogeneous material and immaterial elements, including discourses, objects,

institutions, laws, designs, administrative measures, scientific statements, and moral and philosophical propositions (Foucault, 1980, p. 194). The *dispositif* is the network – or the system of relations between these elements – that enables this ensemble to function for the act of government (Foucault, 1980; Silva-Castañeda, 2014a). Laura Silva-Castañeda has therefore called for a re-interpretation of the techniques and technical devices of conducting populations through government that were alluded to by Foucault, by focussing more explicitly on the *dispositif* rather than broader notions of governmentality and the technologies of conduct. In this sense, the *dispositif* more specifically points to how the ‘conduct of conduct’ (as “an action upon the action of others”) is established and functions, by paying attention to the “practices through which it is possible to constitute, define, organize, instrumentalize the strategies that individuals, in their freedom, can have in dealing with each other” (Silva-Castañeda, 2014a).

The lens of *dispositif* therefore helps to refine Foucault’s broad approach to schooling as a disciplinary technology, exposing how “individual and collective subjects are managed, their contexts regulated, their capacities augmented” (Deacon, 2006, p. 181). The conduct of conduct through educational techniques and mechanisms extends to elements such as: the development of new teaching methodologies; the application of new forms of micro-discipline; the manipulation of bodies; the production and extraction of knowledge; and, the reappraisal of curricula and learning (Deacon, 2006). In what follows, I explore how educational reforms in Peru facilitate the emergence of new disciplinary techniques of education – a new kind of *dispositif* that operates not within the institutional and material confines of the school, but through more diffuse mechanisms designed to ensure that participatory pedagogies reproduce existing forms of knowledge and uphold existing standards. As the *campesino-a-campesino* model of the *kamayoq* is brought into the realm of formal educational reform, the potential for it to contribute to a Freirian radical pedagogy seems to diminish in the face of a revitalized and more encompassing *dispositif* with strengthened ‘instruments of oppression’ designed to entrench elite control over knowledge production and circulation. Importantly, however, the *dispositif* cannot be analysed in terms of linear causality, implying that it imposes external constraints by determining behaviour; rather, intersecting heterogeneous lines of causality lend the *dispositif* a productive dimension, as it gives rise to possibilities of action, new relations of power, and new forms of resistance and subjectification (Silva-Castañeda, 2014a). While there may be a closing of Freire’s radical

pedagogy, new opportunities and avenues open up for the *kamayoq* and the *campesino-a-campesino* methodology.

In the subsequent sections of this chapter, I set up an analysis of the IPEBA framework as a *dispositif* of ethnodevelopment. First, I outline how the discursive strategy of the Peruvian state intersected with its legal and institutional reforms, ultimately being embodied in IPEBA's establishment of the national system of certification. I then focus on the specific case of how the functional maps and knowledge indicators of the IPEBA system act as a *dispositif* in conducting the conduct of both the *kamayoq* and the *campesinos* with whom they interact. Finally, I outline some of the consequences of the IPEBA system, including its uncertainty and the difficulties in 'normalizing' the *dispositif* at the national scale.

Certifying knowledge, rationalizing practice:

The discursive, legal, and institutional basis of a national system of certification

"It is not the *kamayoq* that we are certifying", Peregrina Morgan explained to me with a tinge of frustration, "we certify the *competencies* of the *kamayoq* according to the established standards". Peregrina Morgan is the president of the government institute SINEACE - the National System of Evaluation, Accreditation, and Certification of Educational Quality, which that was created to ensure that education levels meet the basic requirements established under the General Law of Education (*Ley No. 28044*).⁸⁶ We were sitting in Peregrina's home, preparing for the next day's series of presentations at the National Peruvian Congress, organized around the recently published book *Saber Hacer en los Andes* (IPEBA, 2012b).⁸⁷ Having already corrected me once or twice for using the phrase "certification of the *kamayoq*", Peregrina was stressing what she saw as an important distinction: the national programme managed by SINEACE is not designed simply to create a class of professionally qualified *kamayoq* (i.e. by certifying the *kamayoq*); rather, the *kamayoq* are just one of the groups of adult educators whose training and capacities of knowledge dissemination can be

⁸⁶ SINEACE stands for *Sistema Nacional de Evaluación, Acreditación y Certificación de la Calidad Educativa*.

⁸⁷ All quotations of IPEBA documents and Peruvian national laws appear here according to my own translations; I am therefore responsible for any errors of representation. I have also drawn on data from interviews with IPEBA and SINEACE staff (see appendix 1), but to avoid attributing these discursive strategies to particular individuals, I have not included direct quotes from the interviews.

measured and assessed according to national standards. While the latter may contribute to the former, Peregrina was adamant that in my Congressional presentation I must refer to “certification of competencies” (*certificación de las competencias*) rather than “certification of the *kamayoq*” (*certificación de los kamayoq*).

Peregrina’s position reflects a discursive strategy that has been developed and refined within centralized institutes of the Peruvian state, and then promulgated and enacted via a network of partnering institutes, agencies, and organs, ultimately reaching individuals and social groups who have been marginalized from education programmes in the country since Hispanic colonization. Uncovering this combined discursive strategy is necessary in order to understand the evolution of the national system of certification, as well as how it functions as a multi-scalar framework underpinned by a series of legal and institutional changes that entrench the Peruvian government’s mandates for economic development.

The discursive strategy revolves around a series of overlapping key pillars, which sit within SINEACE’s self-defined focus on human capital and competitiveness (IPEBA, 2010, 2011a), and which have evolved over twenty-five years of shifting educational structures in the country. The first discursive strategy focuses on adult intercultural education, conceived in *Saber Hacer* as “education throughout life...[and] as an opportunity for personal development” (IPEBA, 2012b, p. 21), and positioned within national debates on intercultural and bilingual education (*educación intercultural y bilingüe*). While emphasis is placed on social justice, equity, and social inclusion, these components are positioned within a broader context of employability and improved wages; the right to education at the community level is not included as a relevant consideration (IPEBA, 2012b). This reflects the second discursive emphasis on production chains and market systems, with a view to achieving “systemic competitiveness” and stimulating a “qualitative leap...in the quality and productivity of various links in the production chain” (IPEBA, 2012b, p. 19). Certifying the knowledge and skills of livestock producers is aimed at stimulating a shift from “atomized, individualized, and unplanned production” associated with small-scale subsistence farming, and towards commercial production increasingly connected to broader exchange markets through a newly designed supply chain (IPEBA, 2012b, p. 19).

The third discursive strategy evolves from this production chain perspective, as it helps to build a “new rurality”, or new rural life, which is defined better connected to urban areas, markets, information provision, and forms of citizen participation than ever before (IPEBA,

2010, 2012b). Finally, then, a new rurality is based on the fourth discursive emphasis on decentralization, which has seen local governments emerge as the institution of focus in developing new mechanisms for citizen participation, supporting community-level organizations, and arbitrating between rural populations and the national state (Monge, 2006). IPEBA has emphasized that local and regional governments are important actors in the processes of developing a national system of knowledge certification, “not only because they are closer to the needs of the people, but because they can connect more directly the demands of local and regional development, and establish partnerships and synergies” (IPEBA, 2012b, p. 22). As I explain below, IPEBA focussed on building partnerships with different sectors of government and civil society (operating at various scales), which would help establish knowledge certification as a key mechanism for upholding decentralized, horizontal forms of service provision.

This combined discursive strategy did not simply appear in the Peruvian education sector; rather, it evolved in conjunction with a national educational reform process that saw the creation of new educational institutes, designed to “guarantees the right to comprehensive education” (Ley No. 28044) while maintaining a focus on education for enhanced productivity. In 2003, Alejandro Toledo promulgated the *Ley General de Educación* (Ley No. 28044), from which emerged the National Education Project (*Proyecto Educativo Nacional*; 2006-2012), the National Plan for Education for All (*Plan Nacional de Educación para Todos*; 2005-2015), and a second National Education Project to 2021 (*Proyecto Educativo Nacional al 2021*). Together, the plans established a series of ambitious strategies for achieving the new standard of national education established in the general law.⁸⁸

A core component was the establishment of a national framework for assessing the standards of education across three tiers (basic education and vocational training; further education in non-university institutes; and, higher education in universities). This framework was legalized in 2007 with *Ley No. 28740*, which established the National System for the Evaluation, Accreditation, and Certification of Educational Quality (SINEACE; *Sistema*

⁸⁸ The latest National Education Project established six objectives for educational reform, focusing on: equal educational quality for all; quality and relevant learning; teachers who are professionally engaged in a concern for student learning; decentralized, democratic management with educational equity; education for development and national competitiveness; and education that engages citizens and communities (Consejo Nacional de Educación, 2006).

Nacional de Evaluación, Acreditación y Certificación de la Calidad Educativa). SINEACE is a combined legal framework, institutional architecture, and related government institution dedicated to establishing monitoring practices for upholding a form of “quality education” defined in terms of employability, sustainability, and replicability (see IPEBA, 2011a, pp. 90-95). One of its key objectives is therefore to support a system of accrediting institutions and certifying the vocational skills of professionals, for which it established IPEBA.⁸⁹ By 2010, IPEBA had begun a series of pilots in order to test its certification programme in the departments of Cusco and Cajamarca, thereby signalling the transformation of the discursive strategies outlined above into a concrete experiment with training a more productive rural labour force.

However, experimentation with establishing a “professional training programme” (*sistema de formación profesional*) (IPEBA, 2011a, p. 38) had begun two decades earlier with Alberto Fujimori’s implementation of the 1991 Law on the Promotion of Investment in Education (Legislative Decree 882). The law introduced tax incentives for the private education services, creating an imbalance between increased supply and a reduction in quality. As education standards plummeted in the 1990s, a series of diagnostic investigations pointed to weak institutional capacity and a lack of policy continuity. Under pressure from international institutions such as the World Bank and the Inter-American Development Bank, the Peruvian education sector welcomed multi-lateral support from various national development agencies and their diverse frameworks for educational reform.⁹⁰ The evolution of professional training programmes was therefore an “imported reform” (Oliart, 2011, p. 65), as

⁸⁹ The other objectives of SINEACE are: to contribute to improving the quality of educational services at all stages and levels by reforming Peruvian educational programmes and institutions; to ensure that educational institutions meet established quality requirements; and, to collaborate on the measurement and evaluation of learning in the educational system. These are supported by the other two institutes: CONEAU (*Consejo de Evaluación, Acreditación, y certificación de la Calidad de Educación Superior Universitaria*); and, CONEACES (*Consejo de Evaluación, Acreditación, y certificación de la Calidad de Educación Superior*).

⁹⁰ The Spanish Agency for International Development Cooperation (AECID; *Agencia Española de Cooperación Internacional para el Desarrollo*) introduced: the Design of a System of Technical Education and Professional Training (*Diseño del Sistema de Educación Técnica y Formación Profesional*); the Subsystem for Professional Training (*Subsistema de Formación Profesional*); and the National Catalogue of Qualifications (*Catálogo Nacional de Títulos y Certificaciones*). The Swiss Agency for Development and Cooperation (SDC) set-up the Job Training Program (CAPLAB; *Programa de Capacitación Laboral*). The Canadian International Development Agency (CIDA) supported the Technical Educational Reform Project (*Proyecto Reforma de la Educación Técnica*).

experiences from Brazil, Colombia, Argentina, and Chile were all systematically reviewed and their components incorporated into Peru's evolving plans. In particular, Brazil's National Industrial Training Service (SENAI; *Serviço Nacional de Aprendizagem Industrial*) was used as a template for establishing a certification system based on the three pillars of normalization/standardization, vocational training, and testing and certification.

Following Fujimori's exit, Toledo invigorated the reform process, but maintained a focus on the creation of a skilled, employable workforce, deemed fundamental for increased productivity and competitiveness (García, 2005b), as reflected in the emergence of the National Labour Council and the National Competitiveness Council. The General Law of Education, promulgated under Toledo, clearly encapsulated this emphasis:

Education in technical production [*educación técnica productiva*] is a form of education oriented towards the acquisition of labour and entrepreneurial skills, within a perspective of sustainable and competitive development. It contributes to better performance of working individuals, improving their level of employability and their personal development. It is intended for people who seek insertion or reinsertion into the labour market (Ley No. 28044; my translation).

Despite these general trends in national policy-making, studies conducted during the early 2000s identified the continued lack of synergy between labour supply and market demand, as well as poor coordination among a heterogeneous group of institutions engaged in vocational training and a high degree of variability in educational quality. In response, *Ley No. 28740* was drafted in 2006, before formally establishing SINEACE in 2007 as a “specialized technical agency” (IPEBA, 2011a, p. 194), along with the three subsidiary institutes of CONEACES, CONEAU, and IPEBA (see **Figure 22**). The development of a national system for the training and certification of vocational skills had therefore emerged from the top-down, via state-initiated processes of reforming the education sector in line with experiences elsewhere in Latin America, at times according to the direct import of ready-made models (such as Brazil's SENAI).⁹¹

⁹¹ This import of model policies and frameworks reflects recent attention to policy mobility and mutations in the ‘global south’. A parallel analysis could reveal, for example, how the Peruvian experience has ‘mutated’ (that is evolved and diverged) from initial experiences in countries such as Brazil. While tangentially relevant, this literature on policy mobility would take the dissertation in a new direction. For recent critical treatment, see the work of Jamie Peck and Nik Theodore (Peck, 2011a, 2011b; Peck & Theodore, 2010a, 2010b, 2012; Theodore & Peck, 2012).

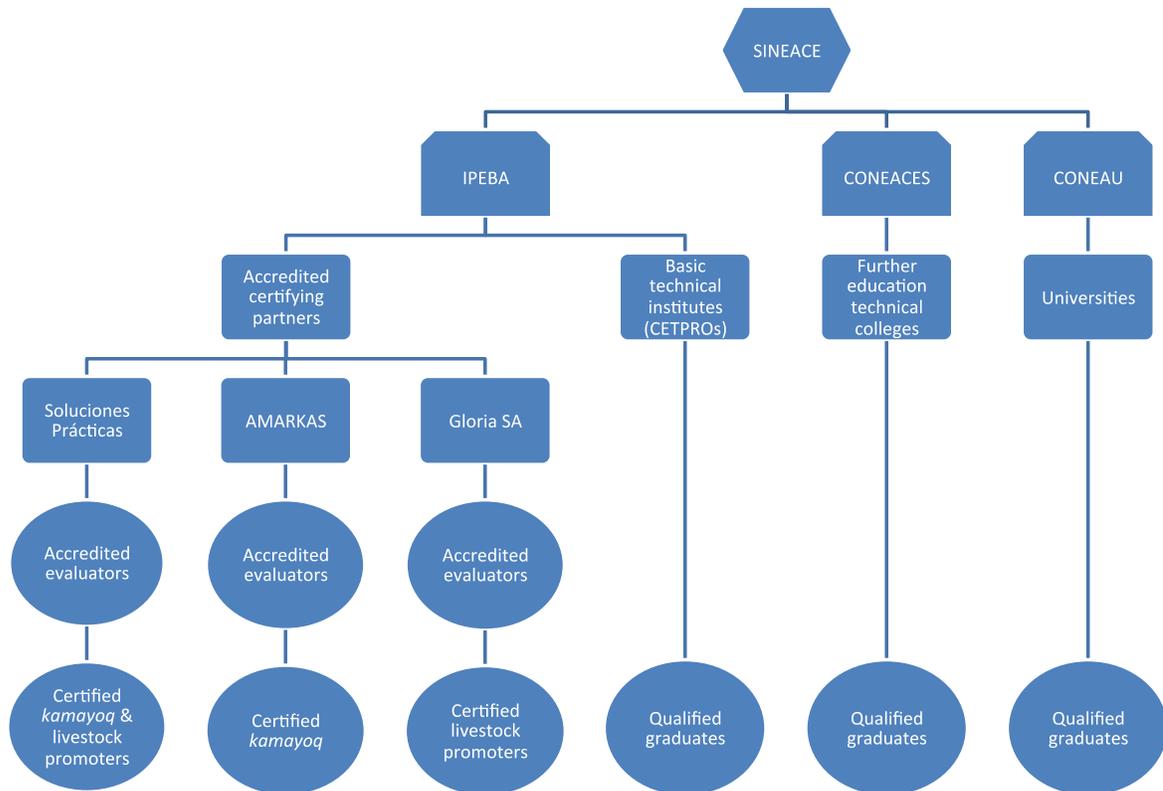


Figure 22 SINEACE-established institutional hierarchy as of 2013 (when research was conducted), with a focus on the certification of livestock promoters (this structure is only part of the institutional picture, which has since evolved to include alpaca herders, coffee growers, grape farmers, and artisanal woodworkers).

These reforms intersected with the discursive strategy outlined above: the discourse and the legal-institutional reform process evolved according to a co-constitutive process that entrenched the notions of employability and productivity in the practice of education institutions. In what follows, I explain the effect that this has had on IPEBA, while exploring the ways in which the certification system has evolved (or mutated) over time in relation to its own remit and objectives (cf. the literature on international policy mutations). The result has been the establishment of a hierarchically organized and centrally governed system of certifying the locally contextual knowledge and skills of rural populations. This raises concerns about how IPEBA affects the potential for the *kamayoq* to act as a fulcrum within a horizontal, Freirian radical pedagogy, let alone contribute to the kind of decolonial intercultural education proposed by Grimaldo Rengifo.

Building the system of certification

With its focus on basic education, the responsibilities of IPEBA fall into two broad categories: the accreditation of institutes of basic and technical education, such as CETPROs (*Centros de Educación Técnico Productiva*; Centres for Technical Productive Education); and, the accreditation of partner organizations responsible for certifying the knowledge and skills of adults engaged in activities of rural training that enhance the productivity of Peru's rural economy (see **Figure 22**).⁹² Here, I focus on the development of the latter, within which the *kamayoq* have played a central role since pilots began in 2009.

IPEBA's aim was to remodel vocational education by establishing a "set of institutions and norms involved in developing new skills and workers, as well as upgrading the skills of workers already in the workforce" (IPEBA, 2011a, pp. 38-39). Overall, the system was conceived as "a formally established organizational arrangement in which is conducted the cycle of identifying, standardizing, training, and evaluating the skills of workers" (IPEBA, 2011a, p. 43). To put this system into practice, experimentation began in the two departments of Cusco and Cajamarca – selected due to their supportive institutional environments and existing demand for skilled workers. Vocational focus was placed on the management of livestock, principally cattle, and the training of *promotores pecuarios* (livestock promoters).⁹³ Given the ubiquitous but highly variable nature of livestock rearing across Peru, however, the pilot had to be built up from local conditions. Two core components were designed to support this ground-up approach: the selection of appropriate certifying partners already working with livestock promoters; and, a series of *mesas técnicas* (participatory technical roundtables, or technical committees) that fit within the broader remit of decentralized citizen participation and community involvement.

The three institutional partners identified early on by IPEBA were: Soluciones Prácticas in both Cusco and Cajamarca; the regional association of *kamayoq* in the Sierra Sur, AMARKAS, in Cusco; and the international dairy corporation Gloria SA in Cajamarca. By

⁹² CETPROs operate as a diverse body of floating educational institutes; they are not tied to formal tiers of education (such as grade levels), but rather provide vocational training for any individual aged fourteen years or more. However, educational reforms are opening up the possibility to graduate from a CETPRO and then advance to a formal institute of higher education, such as a university.

⁹³ A parallel series of pilots were launched in the coffee-producing departments of Junin and San Martin to explore the potential of certifying promoters of coffee growing techniques.

coordinating with these local partners, IPEBA began to build an institutional hierarchy for certification (see **Figure 22**), which Peruvian economist Javier Escobal described as essential for establishing credibility within a neoliberalized labour market (interview, November 2012). Each partner organization had to meet IPEBA's established criteria being able to uphold a system of training and assessment, and of possessing sufficient expertise and institutional and financial resources. Once approved, IPEBA 'accredited' each of these institutions as a 'certifying entity' responsible for: training livestock promoters through a year-long programme; certifying those promoters who complete the training and pass the final exam; and, training and accrediting individuals to carry out the assessment and certification of trained promoters. Thus, a sub-hierarchy within the certification system began to emerge, as IPEBA delegated the task of training and certifying livestock promoters to a network of approved organizations and individuals.

Each of these certifying entities must therefore recruit, train, and 'accredit' a team of experiences and bi-lingual individuals dedicated to training and assessing the livestock promoters. From the outset, IPEBA implemented a rule that the individuals responsible for training the promoters could not be the same individuals carrying out the eventual assessment, thereby entrenching two parallel hierarchies of labour and establishing multiple tracks of employability. Once a team of evaluators is established, the certifying entity is required to maintain and submit detailed information on each evaluator, ensuring that no conflicts of interest arise. Nonetheless, the particular qualities and expertise of the evaluators varies according to context, with Soluciones Prácticas largely drew upon its own networks of professionals and AMARKAS developing links with experienced extension workers from SENASA (the government institute for animal health). As I explore in more detail below, however, this process has evolved, and *kamayoq* from the early rounds of formation in *Escuela de Kamayoq* have been recruited by Soluciones Prácticas to perform the role of evaluator – a development that has seen the *kamayoq* re-enter vertically organized and rigid state structures for governing production.

While ostensibly about grounding the certification system, the strategy of developing local partners helped establish a new hierarchy of governing knowledge, education, and agricultural production (**Figure 22**). It would be misleading, however, to suggest that the certification system was simply implemented from SINEACE 'downward' via IPEBA, the certifying bodies, accredited evaluators, and ultimately to the certified livestock promoters. A

second component designed to build the system from the ground up revolved around the combination of *mesas técnicas* and *equipos técnicos regionales* – technical roundtables and regional technical teams.

IPEBA began by establishing the National Technical Committee of the Agricultural Sector (*Mesa Técnica Nacional del Sector Agrario*), which began as a pre-pilot planning committee consisting of representatives from key government ministries and non-government programmes.⁹⁴ In conjunction with this ‘high institutional’ planning phase, regional technical committees and technical roundtables were formed to develop local profiles for the relevant needs in terms of establishing knowledge indicators (*normas de competencia*).⁹⁵ These regional technical committees are mandated to ensure consultation with local producers and consumers, and to ensure that the certification system – and the series knowledge indicators upon which ultimately it rests – is tied to the knowledge and production needs of local populations. This consultation began early in the pilot, largely instigated by Soluciones Prácticas, which built on its already-existing institutional process of conducting *mesas técnicas* with local interest groups. These local ‘technical roundtables’ feed into traditional Andean community structures, as representatives from community assemblies (an elected body of representatives appointed every three years) and local interest groups come together with technical experts from local and extra-local NGOs and various sectors of government to discuss potential projects and programmes in the region.⁹⁶ In the case of the certification system, the technical roundtables were used to consult with local producers and existing livestock promoters, such as the *kamayoq*, in order to begin the process establishing both the

⁹⁴ Government representatives included those from: the Ministry of Agriculture; the Department of Higher Education and Technical Production within the Ministry of Education; the National Institute of Agrarian Innovation (INIA); the National Service of Agrarian Health (SENASA); and the Programme for the Development of Rural Agriculture (AGRO RURAL). Non-governmental representatives included those from NGOs (such as Soluciones Prácticas and the National Coffee Board (*Junta Nacional del Café*)) and the private sector (including education institutes such as SENATI, and the Association of Exporters (ADEX).

⁹⁵ In Cusco, the technical team consisted of representatives from: the Regional Directorate of Agriculture; INIA; SENASA; Soluciones Prácticas; the regional governmental unit of educational management for Sicuani; the technological institute of Vilcanota (a CETPRO based in Sicuani); the local foundations of Los Tréboles, Fauce, y Quinta Rebeca; the municipalities of Kunturkanki and Checca; the agricultural colleges of Sicuani and La Salle; and, the local NGO Arariwa.

⁹⁶ These interest groups often consist of coalitions of households, which is an important factor for understanding the potential for conflict to emerge from community-level decision-making (Mayer, 2002).

functional map of the promoters, and the knowledge indicators that would be used to assess the progress of each promoter according to the map.

Foucault might therefore conclude that these *mesas* are fundamental to the emergent *dispositif* of the IPEBA framework. As I explain in the following section, this functional map acts as a tiered framework for categorizing and assessing the knowledge and skills of each livestock promoter, beginning with a broad sector of agro-production, such as livestock management, before drilling down to more specialist skills and techniques, such as animal health, and the knowledge required to perform these techniques effectively. The results from the series of local technical roundtables, including the localized needs of producers, therefore fed into the decision-making and strategic planning processes of the regional technical committees, which were ultimately responsible for drafting the functional maps and the knowledge indicators. The functional maps therefore reflect the establishment of techniques of self-government, oriented towards the broader trajectories in Peru of educational reform and rural productivity. How, then, do these functional maps and knowledge indicators work within the institutional framework established by IPEBA, and what are their effects?

The conduct of indicators: knowledge certification as a *dispositif*

Before delving into the details of the functional maps and knowledge indicators, it is worth pausing to recall the certification process as a whole. Within the evolving, hierarchically organized institutional context outlined above, the training of livestock promoters (among which the *kamayoj* are a particular, contextual form in the Sierra Sur) occurs over the course of one year, consisting of eighty per cent practical and twenty per cent theoretical education. This training is conducted by NGOs such as Soluciones Prácticas, beginning with typical capacity-building scenarios that bring together potential candidates to ‘inform’ them of the opportunity to achieve IPEBA certification. After identifying interested parties through these meetings, those who sign-on begin a year-long training process within a particular sphere of livestock production (e.g. animal health, nutrition, breeding, etc.). At the end of the year, a team of qualified and IPEBA-approved evaluators examines the candidates on an individual basis and in terms of practical application of the knowledge indicators. Those who succeed are awarded an IPEBA-sanctioned certificate that testifies to their knowledge and skills in the relevant sub-sector.

Importantly, the certificate testifying to the knowledge and skills of each *kamayoq* is only valid for a period of either three or five years, depending on the speciality and the training involved. As Javier Escobal (interview, November 2012) pointed out, this detail could open doors to a dynamic process of continuously evolving knowledge validation, and yet may also undermine the rationale behind certification altogether, especially if it is not linked to the possibility of advancing to new levels of certification. I address implications such as these in the following section. First, however, in exploring the IPEBA system as a *dispositif*, it is necessary to establish precisely what measures of knowledge and skills are used to examine the *kamayoq*, and to what extent can these measures be said to represent what is and is not deemed appropriate *kamayoq* knowledge. To address these issues, I turn to the combined role of the functional map and the pre-determined knowledge indicators, suggesting that they operate as a *dispositif* that conducts the conduct of the *kamayoq* by creating a “grid of specification” (Foucault, 1972, p. 42). These grids of specification reflect the “systems according to which different forms [of knowledge] are divided, contrasted, related, regrouped, classified, derived from one another as objects of discourse” (ibid.).⁹⁷ They therefore construct what the knowledge and skills of the *kamayoq* should and should not entail, thereby incarcerating *kamayoq* in a particular professional and epistemological space (Appadurai, 1988).

The process of certifying *kamayoq* knowledge and skills revolves around the ‘professional profile’ of each candidate, which consists of their progress in terms of a ‘functional map’, in turn upheld by a related set of knowledge indicators. Overall, there are twelve competency units in a professional profile (see Table 6), plus two “transversal modules” on “planning for participatory budgets and local development” and “gender and leadership” (IPEBA, 2012a).⁹⁸ To complete the training and testing process for a specific unit, each *kamayoq* must complete

⁹⁷ Foucault (1972) identified a series of grids of specification in relation to nineteenth century treatments of ‘madness’, focusing on issues such as the soul, the life and history of individuals, and neuropsychological attributes. I deploy use the phrase ‘grids of specification’ to refer to the embodied practical knowledge of individuals – to the intersection of knowledge and practice with the life, history, and psychological attributes of an individual.

⁹⁸ In addition to these twelve modules, there are two “transversal modules” on “planning for participatory budgets and local development” and “gender and leadership”. As I explained in the previous chapter, the combination of these two additional modules is designed to encourage women *kamayoq* to take up positions as community-based leaders and to direct community processes of drafting plans for the PBs.

Table 6 The twelve units of the functional map (compiled from IPEBA, 2012a)*

Unit	Description
Cattle feeding	Use feeding techniques according to the development stage of the cattle.
Handling and care of cattle	Plan and carry out the care of cattle, taking into account the characteristics and conditions of intensive or extensive farming.
Reproductive management	Plan, conduct, and advise on reproductive processes for the improvement of dairy cattle, using artificial insemination techniques according to current technology.
Livestock health	Plan, organize, and execute the disease control program according to the rules established to maintain the health of cattle.
Organic fertilizers	Organize, lead, and execute the production of organic fertilizers, considering demand and profitability.
Pastures and forages	Organize, manage, and execute actions for the sustainable production and management of pastures and meadows.
Dairy production	Organize and execute process in the transformation of dairy operations, following rules and standards to ensure product quality.
Agricultural labour	Organize, conduct and direct the operations of production of agricultural parcels to ensure product quality, and monitor compliance with safety and environmental conservation.
Improvement of housing	Plan and carry out the improvement of rural housing in compliance with the socio-cultural characteristics of the population.
Training	Design and develop extension workshops for capacity building, assessment tools, and educational materials.
Innovation and research	Design and develop participatory experiments for adapting crops or breeds, and the introduction of new technologies.
Information management	Provide updates of new technologies and market trend information related to your industry.

* See appendix 3 for a breakdown of all twelve modules according the functional fulfillments.

between five and eight ‘functional fulfillments’ (see appendix 3 for a list of all of the functional fulfillments associated with each unit). The professional profile therefore documents the ability of the candidate to meet a broad set of performance criteria, including: organization capabilities; communication skills; capacities for cooperation with superiors, peers, and ‘subordinates’; and, the ability to respond to contingencies (IPEBA, 2011c).

The functional map is basically a categorization of occupational specialties (that is, a creation in line with what Foucault might call a micro-discipline). This map emerged from a broad functional analysis conducted by the national technical committee, and was designed to aid in the ‘normalization’ of the certification process according to a process of creating ‘standardized’ knowledge indicators. The functional analysis identified the key areas of the productive sector in which *kamayoq* were expected to perform, and the first part of the process in pursuing certification is to select a particular productive sector. A functional analysis at the individual level, also known as an occupational analysis, is then undertaken in order to assess the professional expertise of the candidate within the chosen productive sector. This analysis is

based on a practical illustration of competence in relation to an established set of knowledge indicators for the chosen productive sector and sub-sector. Initial work on establishing these indicators began in the National Technical Committee of the Agricultural Sector, with INIA and SENASA taking the lead. They were then refined in collaboration with other partners, and with the participation of *kamayoq* and other livestock promoters in local technical roundtables. The rationale is that these indicators reflect both the established best practices associated with the livestock sector (thereby pushing for productivity improvements) *and* the local and contextual forms of knowledge and skills that have helped to sustain the livestock sector in Peru for generations (thereby validating and strengthening these knowledges).

One of the limits to this process of establishing, standardizing, and normalizing the functional maps and lists of indicators is the rigidity that gets built into *kamayoq* training and professionalization. In seeking certification as a livestock promoter, a *kamayoq* may select a sub-sector such as reproductive management. For each sub-sector there is a series of *realizaciones* – or ‘fulfillments’ – that direct the *kamayoq*’s training and eventual evaluation. For each fulfillment, there is a list of performance criteria (*criterios de desempeño*), which are measured according to a corresponding list of established forms of evidence. When being assessed according to these criteria, *kamayoq* must demonstrate their abilities in terms of ‘evidence of knowledge’, ‘range of application’, ‘desirable attitudes’, and other ‘general guidelines’, each of which contain another sub-list of criteria to be assessed. For each of the twelve functions associated with livestock promoters, there are between five and eight fulfillments, all containing similar sub-lists of indicators and criteria, according to which the *kamayoq* must illustrate their competency before obtaining an IPEBA-approved certificate that testifies to their professional skills and status.

Take, for example, the module on reproductive management, for which there are five functional fulfillments (**Table 7**) designed to support the overall goal of the *kamayoq* being able to “plan, conduct, and advise on reproductive processes for the improvement of dairy cattle, using artificial insemination techniques according to current technology” (IPEBA, 2012a, p. 31).⁹⁹ The third fulfillment of artificial insemination is broken down into three further sub-fulfillments, the assessment grid for the first of which – identifying females for

⁹⁹ I use this example partly to illustrate the format in which these indicators appear, and partly because I return to the issue of assisted reproduction in chapter seven.

breeding – is presented in **Table 8**. These functions and fulfillments not only steer the *kamayoyq* in pre-determined directions concerning the implementation of their practical knowledge, they also harbour tensions between the endogenous knowledge of the *kamayoyq* and the introduction of new techniques associated with reproductive science.

The process reflects an effort to institutionalize and normalize a standard package of productive improvements, including techniques to address factors that may inhibit such improvements. The fact that each matrix contains a section on ‘desirable attitudes’ illustrates how these indicators act as what Foucault calls the “capillary form” of the mechanisms of power, whereby “power reaches into the very grain of individuals, touches their bodies and inserts itself into their actions and attitudes, their discourses, learning processes and everyday lives” (Foucault, 1980, p. 39). They take on this character in the very act of attempting to fix the knowledge of the *kamayoyq*; as Foucault explain, epistemic knowledge is not that which “may be known at a given period, due account taken of inadequate techniques, mental attitudes, or the limitations imposed by tradition; it is what, in the positivity of discursive practices, makes possible the existence of epistemological figures and sciences” (Foucault, 1972, p. 192). *Kamayoyq* knowledge should not be fixed to boxes of indicators, but rather opened up to critical, reflexive perspectives – to “a questioning that accepts the fact of science only in order to ask the question what it is for that science to be a science” (ibid.).

Table 7 Functional map for the module on the reproductive management of cattle (compiled from: IPEBA, 2011b, pp. 31-42, author’s translation)*

Module:	<i>Reproductive management of cattle</i>
Description:	Plan, conduct, and advise on reproductive processes for the improvement of dairy cattle, using artificial insemination techniques according to current technology
Fulfillments:	<p>Develop a Plan for Reproductive Management and Genetic Improvement, according to production processes.</p> <p>Perform operations of natural breeding to obtain results for the Plan for Reproductive Management.</p> <p>Conduct artificial insemination, taking into account the standards and recommendations of hygiene and care of livestock.</p> <ol style="list-style-type: none"> a. Identify and manipulate females in heat. b. Manipulate semen and insemination equipment. c. Conduct insemination process. <p>Perform pregnancy diagnosis in cattle, and track gestation, preventing and solving possible anomalous problems during the process.</p> <p>Perform midwifery of cattle, considering the type of delivery and taking the necessary precautions to ensure a quick recovery of the cattle.</p>

* See appendix 3 for a breakdown of all twelve modules and their functional fulfillments.

Table 8 Example functional map: reproductive management of cattle 03 (IPEBA, 2011b, p. 34).

COMPETENCY NORM: 03 MANREP	
PRODUCTIVE FUNCTION: Reproductive management of cattle	
LEVEL OF LABOUR COMPETENCY: L3	
COMPENTENY UNIT: Plan, conduct, and advise on reproductive processes for the improvement of dairy cattle, using artificial insemination techniques according to current technology.	
FULFILLMENTS: Conduct the process of artificial insemination considering the standards and recommendations of hygiene and care of the livestock. a. Identify and manipulate females in heat [in reproductive season].	
PERFORMANCE CRITERIA	EVIDENCE
<ol style="list-style-type: none"> 1. Observation of females conducted according to the characteristics of heat. 2. Females were observed over a period of time in order to identify the conditions and behaviours of heat. 3. Females in heat have been separated from the group. 	<p>Performance</p> <ol style="list-style-type: none"> 1. The form of conduction observations of the females. 2. The form of identifying conditions and behaviours of heat. <p>Outputs</p> <ol style="list-style-type: none"> 3. Females effectively separated from the group
EVIDENCE OF KNOWLEDGE	RANGE OF APPLICATION
<ol style="list-style-type: none"> 1. Physiological changes of the cows. 2. Conduct/management of females in heat. 3. Principle characteristics of heat. 	<ol style="list-style-type: none"> A. Conditions of heat: pre-heat, heat, false heat. B. Systems of identification: manual, mechanical
DESIRABLE ATTITUTDES	
<ol style="list-style-type: none"> 1. Delivers critical assessment based on observation. 2. Responsibility in carrying out the work. 	
GENERAL GUIDELINES FOR THE EVALUATION	
<ol style="list-style-type: none"> 1. Verbal questionnaire regarding evidence of knowledge 2. Direct observation of performance for obtaining evidence of the performance; in the case of not demonstrating a real/live situation, the evaluator must consider the historical evidence on the performance of the worker and the outcomes that have been submitted to third parties. 3. Assessment completed in the field. 4. Suggested instruments to assist in the evaluation: observation guide; interview guide. 5. The evaluator should consider the handling of living beings, which require good treatment. 	

As I argue in chapter seven, these evaluation matrices, and their role as a *dispositif* in conducting the conduct of the *kamayoq*, serve to re-condition the relationship between the *kamayoq* and nonhuman nature – in this case with cattle, but more recently with alpacas, thereby reshaping the historical and symbolic ties between these important two actors in the Andean living world (see appendix 4 for a list of the functional fulfillments pertaining to camelids). The indicators for understanding females on heat, for example, reflect an intimate relation between the *kamayoq* and the cattle or camelids, as the former must be in tune with the female’s signs of fertility. While no less ‘intimate’, however, the second sub-fulfillment for managing reproduction is designed to assess the skills of the *kamayoq* in manipulating semen and artificial insemination equipment. *Kamayoq* are trained to replicate good practice in these techniques, thereby shifting emphasis from an empathetic form of knowledge to technical praxis.

The certification system also entails a process of normalizing the technical functions and knowledge types of the *kamayoq* and rural promoters in general across Peru, as the knowledge of *kamayoq* in Cusco is measured according to the same functional fulfillments as that of rural promoters in Cajamarca. This process shrouds local and contextual differences, folding specific knowledge practices that are grounded in generations of experience into a universal metric for ‘improving’ and assessing all livestock herders across Peru.¹⁰⁰ Livestock promoters in Cajamarca are therefore deemed to have and to need the same practical skills and knowledge as the *kamayoq* in Cusco, despite the contrasting structural, historical, and environmental conditions in the two departments – a testament to which is the mere presence in Cajamarca (and not in Cusco) of the international dairy corporation Gloria SA, as well as the historic connotation of the *kamayoq* title in Cusco (which doesn’t exist in Cajamarca). To treat the knowledge and productive needs as equal in Cajamarca and Cusco relies on the process described by Stephen Marglin (1996) of overriding the contextual articulation of *technē* with a universal form of *epistemē*; while the knowledge indicators may appear technically focussed, their power and utility within the IPEBA system of certification lies in their universal application through normalization. The stress on normalization therefore reduces the *kamayoq*, first to an assumed singular and coherent cadre of experts (all *kamayoq* practice the same technical skills and knowledge), and second to a culturally devalued status of generic livestock promoters, who are assumed to be the same across Peru (the *kamayoq* in the Sierra Sur are the same as livestock promoters in the north). This trend contrasts sharply with Grimaldo Rengifo’s model of a plural form of education designed to embrace and enhance cultural diversity, rather than to condition populations along the teleological lines of Western scientific education.

¹⁰⁰ As a rule, IPEBA refers to ‘normalization’ as the broad process of creating a package of functions and knowledge indicators for promoters across the country, within which it refers to the creation of identified ‘standards’ (such as ‘performance standards’). While the terms normalization and standardization may appear tautological, they refer to two related yet distinct parts of the process. The former – from the Spanish ‘*normas*’ – relates to the process of creating rules and norms that the promoters must follow; that is, defining the general conduct of the promoters. Standardization refers to the processes creating standards, rather than the practice of making something universally accepted and adopted (such as in the colloquial English phrase ‘standard practice’); that is, the rules of normalization are designed to create a particular standard, or benchmark, which all promoters must achieve, thereby defining the specifics of the conduct of the promoters.

The *dispositif* of the functional fulfillments therefore begins to recondition and normalize what *kamayoq* knowledge and practice should entail – a process that is reinforced by the establishment of arts of self-government. During the training and assessment process, each *kamayoq* is given every opportunity to *ensure for themselves* that they meet the required standards. In this process – referred to by IPEBA as self-diagnosis (*autodiagnóstico*) – a *kamayoq* meets with a potential evaluator and conducts a self-assessment to identify strengths and weakness in their knowledge and skills, and ultimately to create a work plan that ensures future progress occurs in line with IPEBA’s targets. On the surface, this process appears to empower the *kamayoq* to take control of their own certification, to strengthen and assert their own knowledge and skills to as to ensure that they are recognized and validated. However, the fact that this self-diagnosis occurs within the system of normalized and pre-determined standards merely reinforces the role of conduct established by a national certification system. The account of self-diagnoses presented in *Saber Hacer en los Andes* is telling:

“The aim [of self-diagnosis] was that the applicant could consider whether s/he had the competencies set out in the knowledge indicators [*normas de competencia*] and could decide to join in the process of evaluation and certification. The idea is inclusive in that the candidates could take a short period of preparation or training to enable them to strengthen the skills they already have in the area they want to be evaluated. This preparation prior to the assessment was optional, and it allows them to train with reference to the established standards, avoid personal frustrations, and help to solidify the certification process itself’ (IPEBA, 2012b, p. 80).

This optional process, IPEBA tells us, helps the *kamayoq* to decide *for themselves* if they are ready, able, and willing to be assessed according to IPEBA’s pre-determined standards. The *kamayoq* are therefore presented the option of fine-tuning themselves according to IPEBA’s rules, crafting within the system a process of self-selection, which ensures that those *kamayoq* who choose to pursue certification know exactly what they are aiming for and have committed to performing in line with IPEBA’s expectations.

In contrast to this spatial normalization, the IPEBA certification system is designed to be temporally dynamic in two related ways: by continuously revising the functional maps and knowledge indicators through new rounds of technical roundtables; and by awarding certificates with limited validity for either three or five years (depending on the module), thereby ensuring that promoters return to validate their knowledge according to the latest portfolio of technical standards. This combination of policies appears to open up the certification process: the limited term of awarded certificates, for example, may ensure that

promoters return to their certifying entity to update their knowledge and acquire a new certificate when their existing certificates are about to expire. However, the requirement of being re-evaluated on a temporal basis entrenches the work of the *dispositif*, as the *kamayoj* are continuously being conditioned according to the functional fulfillments. This effect may be abated somewhat as the indicators and functional fulfillments are revised through new rounds of technical roundtables, enabling the *kamayoj* to re-shape the certification requirements according to their context. Yet this also reflects broader critiques of the ways in which participatory methodologies fit within the governmental techniques of states and development agencies, thereby cementing the art of self-government (Kothari, 2001, 2005; Mosse, 2001).

From a more logistical perspective, Javier Escobal pointed out that this process of cyclical re-certification increases competition amongst the promoters, as increased numbers of candidates are effectively returning for the same level of certificate. A fairer system, Escobal argued, would offer the opportunity to advance to new levels when returning to update one's certificate, thereby also cultivating a desire to advance and build more knowledge:

If I certify that a person knows something, unless I have a theory of knowledge depreciation, in principle there should be no recertification. There may be a certification at a second level, when I certify that someone has learned something extra, but I should not re-certify you for the same knowledge (interview, November 2012).

During the period of my research (2012-2013), decision-makers within IPEBA were contemplating the introduction of certification levels, though it remains to be seen how this would be put into practice. Regardless, these efforts to build flexibility into the certification system emphasise the already-apparent contradiction in its purpose and effects, on the one hand enhancing employability and competitiveness, while on the other supporting intercultural, community-based education for more equal access to locally produced knowledge and skills. In the next section, I explore the effects of this uncertain disciplining path.

Uncertain effects

According to IPEBA and Soluciones Prácticas, demand for certification amongst the *kamayoj* originated from a desire to be recognized for their role in supporting indigenous, community-based mechanisms of enhancing production and building knowledge on sustainable agriculture. Amongst the *kamayoj* I spoke to, however, these were secondary to the potential

employment opportunities brought by certification, whether for local municipalities, NGOs, or in the private sector (such as for agricultural service providers or mining companies). When Stuart Coupe (2009) conducted his internal investigation in 2008, seventy-two per cent of participating *kamayoyq* cited knowledge as their initial motivation for training, while forty-five per cent pointed to a knowledge-based obligation to the community, and just seven per cent mentioned income generation. Five years later, knowledge distribution was still regarded as the key *responsibility* of *kamayoyq*, but motivations for *becoming* a *kamayoyq* had shifted almost entirely to income generation, with the most recent graduates of *Escuela de Kamayoyq* in particular stressing the importance of certification in this regard.

The *kamayoyq* also pointed to the importance of IPEBA certification in raising self-esteem (*autoestima*) and boosting morale; that is, in enhancing a subjective sense of empowerment. Yet the majority of benefits that can be derived from certification largely come with the completion of the first module; that is, after receiving the certificate for the first chosen sub-sector. As Francisca, a *kamayoyq* from Kunturkanki, explained:

the first certification helps a lot, but the third does not have the same value as the others. I would like to introduce myself to the municipalities, and it is good to come with certificates, but now they ask for other documents, and the municipalities and other institutions ask for work experience of a year or two years, and we have never worked, we haven't gained that experience. There are some who have been working in the city for two or three years. So it is not enough that we have more documents (interview, February 2013).

Francisca's comments illustrate that while the certification system has diminishing returns for the *kamayoyq*, it creates value in itself: the supply of certificates simply creates greater demand amongst employers for certified *kamayoyq*, thereby excluding those without certification. While it is too early to suggest that the certification system is contributing to a class distinction between certified and non-certified *kamayoyq*, it does appear to have opened up a new kind of career path, as the more established generations of *kamayoyq* have been recruited by certifying bodies to perform the role of evaluators. Yet with IPEBA's rule that evaluators cannot hold their own original certification from their employer, this career path may be circumscribed as certification becomes increasingly prevalent, unless accompanying increases in the number of certifying bodies can establish a sub-sector of employment amongst this network of organizations.

Nonetheless, IPEBA and *Soluciones Prácticas* have supported the discursive angle of employability. Gabriela Arrieta – Director of the Evaluation and Certification Unit at IPEBA –

stressed the importance to the “economic life” of the *kamayoq* that the official status of the certificate and the accompanying national registry of certified individuals would have:

They now work in public institutions – rural municipalities have hired them. For example, SENASA, which is the national system for the prevention of animal diseases, they have also employed them as vaccinators, as experts in artificial breeding of cattle. INIA as well” (interview, 18 October 2012).

In conversations and interviews, as well as at a formal presentation in Peruvian Congress (24 April 2013), Peregrina Morgan and Carolina Barrios – the President and Director, respectively, of the Board of Governors of SINEACE – consistently reproduced this employability discourse, despite recognizing that the evolution of IPEBA has not gone entirely according to plan (the latter in particular stated that something had been “lost along the way” in developing the certification programme). These key players therefore contextualize the process of institutionalizing certification almost entirely in terms of neoliberalized market benefits, focussing on a flexible labour force, competitiveness (both individual and national), and gaining access to markets. Even discussions on intercultural education often revolve around the development of human capital in order to bring indigenous populations into the broader labour force (albeit phrased in terms of creating opportunities). The process of revising the knowledge indicators has also been framed in terms of responding to market demand, rather than in terms of revitalizing *kamayoq* knowledge, as the question of how frequently to conduct these revisions has been addressed in terms of matching changes in the occupational field and changes in labour market dynamics (IPEBA, 2012b).

This tension reflects an internal illogic to the certification system, whereby thinking in terms of providing employment opportunities and income for the *kamayoq* in fact distorts the notion that certification can be organized according to the supply and demand dynamics of the labour market. Javier Escobal described this illogic:

The *kamayoqs* have a very strong demand for certification because in the end they feel that certification opens the opportunity to compete in local markets. It is interesting because – and I will say it in economic terms – certification is a barrier to competitive entry: I am a certified *kamayoq* and with that I can beat others who want to be *kamayoq*, then I have more chances to win in this market of technical assistance. There should be two types: there are people in the communities, the older people, with a lot of experience doing this work of imparting knowledge in a sense of responsibility, community leadership, but they do not necessarily do it as a way of life. And apart from that, there is this generated market for *kamayoqs*, where they are entering the market to obtain a livelihood for income. Then, the motivations of the more traditional *kamayoqs* can be very different to these younger people who are competing in the market with other forms of technical assistance. (Javier Escobal, interview, November 2012)

Javier Escobal not only understood that certification is contributing to the production of a different kind of *kamayoq*, he also encapsulated the dual logic of organizing the certification system according to both the knowledge and income needs of the *kamayoq* on the one hand, and neoliberal labour market dynamics on the other. Demand for certification on the basis of enabling entry into labour markets does not fit within the neoliberal logics certification, as it distorts the labour market that IPEBA and SINEASE argue certification is designed to address. Nonetheless, SINEACE has driven a process of scaling-up the certification framework, in terms of demanding spatial expansion to new areas of Peru, increasing the numbers of *kamayoq* certified, and developing certification procedures for more sectors of rural production. Soluciones Prácticas has been called upon to deliver all three components, with Proyecto Paqocha launched in the departments to establish a certification system for *alpaqueros* in Apurímac and Ayacucho. These rapid plans for expansion, however, are taking their toll.

Growing pains

In terms of precisely how the certification system will be rolled-out nationwide, the data from IPEBA's registry of certified livestock promoters is revealing: since 2011, 350 promoters have been certified by Soluciones Prácticas, 95 by AMARKAS, and just 28 by Gloria SA. Overall, this equates to an average certification rate of approximately 160 livestock promoters per year, but they remain spatially concentrated, with a total 419 *kamayoq* certified in the Sierra Sur (276 in Cusco, 96 in Puno, and 48 in Apurimac) and just 53 in Cajamarca. Despite IPEBA's attempt at normalizing the certification system in order to facilitate a national roll out, 88.6 per cent of certified livestock promoters are *kamayoq* from the Sierra Sur. Yet being a *kamayoq* does not necessarily translate easily into IPEBA certification: within the Soluciones Prácticas programme to expand *kamayoq* training and certification to Apurimac and Ayacucho (Proyecto Paqocha), a total of 68 *kamayoq* were trained in Apurimac, with 27 in Antabamba and 24 in Aymaraes. As Table 9 indicates, however, only 48 of the *kamayoq* trained in the department emerged with IPEBA certification, with just 17 graduating in each of the two provinces.

Table 9 Numbers of *kamayoq* certified in research locations (2011-2014)

Total number of livestock promoters certified nationwide	473
Total in Apurimac	48
As a proportion of the national total (%)	10.1
Total in Antabamba	17
As a proportion of the department total (%)	35.4
Total in Aymaraes	17
As a proportion of the department total (%)	35.4
Total in Cusco	270
Proportion of total (%)	57.0
Total in Canas	150
As a proportion of the department total (%)	55.6
Total in Canchis	61
As a proportion of the department total (%)	22.6

This departmental success rate of approximately 70 per cent (63 per cent in Antabamba 71 per cent in Aymaraes) is not likely to undermine the programme entirely; nonetheless, it does point to some broader questions facing attempts to scale up the certification system. Indeed, some logical questions arise: can this rate of certification continue; how can the uneven spatial differentiation in the total numbers and the rate of certification be addressed; how can indicators be transported between regions and productive sectors; and, to what extent will a rapid roll-out of the system compromise the quality of training, the consistency of evaluation, and the inter-institutional relations required to put it into practice? In this section, I address these questions by focussing specifically on Proyecto Paqocha and the role that IPEBA expects Soluciones Prácticas to play in supporting the national roll-out. I discuss in turn: the development of alpaca-specific functional maps and knowledge indicators; the role of Soluciones Prácticas projects and workshops in extending IPEBA's rationale; the stresses placed on 'spaces of inter-agency cooperation'; and the evolving plans for further integrating the *kamayoq* into the broader labour market and formal education.

Training and certifying *kamayoq* as part of Proyecto Paqocha presented new institutional challenges for expanding the IPEBA system, not least the need to adapt the already-established functional maps, which were developed for cattle rearing in the contrasting conditions of Cusco and Cajamarca. Initial focus from IPEBA was on transferring the existing indicators, adjusting them to the needs of alpaca herders. Following consultation with *alpaqueros* and experts from the alpaca sector, however, Soluciones Prácticas shifted the focus to three core components: the management of reproduction and genetic improvement;

improved shearing techniques; and mastering improved techniques for classifying alpaca wool (see appendix 4). The purpose was to “establish best practices in livestock management for the sustainable and competitive production of domestic camelids according to the quality and productivity standards required by the market”. The *kamayaq* are then expected to use “participatory tools and methodologies to transfer innovations according to socio-economic contexts” (Gutiérrez Hermoza, Atanacio Carbajal, Villanueva Rojas, & Velásquez Cárdena, 2013, p. 7). In contrast to the functional maps and knowledge indicators for cattle rearing, therefore, the new process to be introduced for *alpaqueros* focussed explicitly and *only* on market dynamics; the entire expansion of the certification system to the alpaca sector was framed in terms of rural service provision to enhance “the production chain of domestic camelids”.

Nonetheless, as per IPEBA practice, each of the three broad functions was divided into sub-functions. Managing alpaca breeding and genetic improvement, for example, was divided into modules on: managing and implementing good practices of production management according to the traditional livestock calendar and by recovering local knowledges (consisting of 10 sub-modules); and improving the development and conservation of appropriate and sustainable pastures to ensure animal nutrition (consisting of six functional fulfillments).¹⁰¹ The module on shearing, meanwhile, focuses largely on technique and on timing shearing in alignment with the livestock calendar (with 8 fulfillments), while alpaca wool classification addresses the ranking of alpaca fibre according to Peruvian technical standards (with 3 fulfillments). As with certification in cattle rearing, each fulfilment is broken down according to groups of indicators relating to ‘performance criteria’, ‘evidence of knowledge’, ‘range of application’, ‘desirable attitudes’, and other ‘general guidelines’. The strategy of normalization, then, is not restricted to the content-specific output, but pertains to the very process itself, to the way of knowing the production sector and the way in which knowledge is produced. The *dispositif* is therefore put to work on means, rather than ends, reflecting the broader trend in development identified by David Mosse (2005).

As I explain in chapter seven, the particular techniques that are a prioritized in the functional maps also reflect a broader trend in the alpaca industry to increase productivity in

¹⁰¹ As I explain in chapter seven, this focus on the alpaca breeding calendar and on reviving local knowledges regarding animal selection raises an interesting debate about the intersection of cultural and techno-scientific processes of animal reproduction.

rural areas and to better connect rural production to markets. The focus on reproduction and genetic improvement, shearing techniques, and wool processing directly mirrors the work being undertaken in alpaca research stations run by both the private sector and publically funded institutions. Proyecto Paqocha serves to link IPEBA's emphasis on enhancing alpaca production chains with the kinds of knowledge and expertise being produced in these research centres. Soluciones Prácticas workshops, for example, reflect the tensions between market access and strengthening existing and indigenous knowledge. These workshops bring together the *kamayoq*-in-training to introduce new topics of capacity building, including the concept of collective commercialization as a way to enhance access to markets. While collective commercialization fits within Proyecto Paqocha's remit to strengthen both *kamayoq* and *alpaqueros* as collective market actors (see chapter six), improving access to markets is one of four core programme areas pursued by Soluciones Prácticas. As part of the project, therefore, Soluciones Prácticas convened a series of workshops in which an external consultant delivered a range of techniques for adding value to alpaca-related products and improving options for getting these products to market.

Each workshop proceeded in the same way: following some introductory remarks regarding the importance of improving the alpaca production chain, the *kamayoq* were taught about the market values of products such as 'correctly' separated wool, dried meat, and leather. They were then split into groups and were asked to brainstorm various potential strategies for shifting their production towards these products and establishing mechanisms for more efficient access to markets. This process is framed as a 'participatory diagnosis of market systems', designed to help the *kamayoq* emerge with their own 'solutions'. "Unlike a traditional market study", the consultant proclaimed, "this is a participatory process in which actors build their capacity, perform the analyses and the proposals, and become authors and owners of the study and the claims that arise from it" (Daniel Aréstegui interview, July 2011). The *kamayoq* were – in effect – learning how to craft themselves into sector-specific entrepreneurs, reflecting a coming together of Walker et al.'s (2008) notion of "entrepreneurs of themselves" and the broader Foucauldian critique in development studies of participation acting as disciplinary technique in establishing the art of self-government (Kothari, 2001; Mosse, 2001).

Following the participatory component, the *kamayoq* were taught how to dissect various components of the alpaca production chain, distinguishing between different types of

producers and suppliers, and between primary and secondary production functions, as well as identifying different commercial strategies for various parts of the production chain. I explore the alpaca production chain in greater detail in chapters six and seven, but suffice to say here that more than 85 per cent of alpaca production in Peru is oriented towards external markets. Training the *kamayoq* in production chain analysis, and in identifying ways to add value at various points along the production chain, directly feeds into IPEBA's remit of enhancing national competitiveness by squeezing out small productive gains at the base of Peru's alpaca production chain.

More broadly, these workshops fit within Soluciones Prácticas' plan to embed CIAR around the establishment of a network of local systems of innovation that rely on the *kamayoq* and their role as knowledge distributors and agricultural extensionists. As the previous chapter established, Soluciones Prácticas has tended to be conservative when it comes to spatially expanding its programmes and interventions. It is no surprise, then, that IPEBA's push to rapidly roll out the certification system has created tensions within what IPEBA described as "spaces of inter-agency cooperation" (IPEBA, 2012b, p. 25). While inter-institutional relations have become the hallmark of agricultural extension in Peru and the technical assistance programmes of international NGOs more broadly (Ortiz, 2006; Walker et al., 2008), Soluciones Prácticas is beginning to feel the strain of working within an increasingly centralized programme of establishing nationwide certification. This strain has emerged in two senses: as a drain on institutional capacity; and as a sense of dwindling ownership over what Soluciones Prácticas considers to be its own flagship programme of *campesino-a-campesino* development revolving around the *kamayoq*.

First, Paca Villanueva – who has led the expansion from *Escuela Kamayoq* to CIAR – revealed the difficulties of working in partnership with IPEBA and SINEACE, the latter in particular being guilty of claiming as its own the proposal for state recognition that Soluciones Prácticas made years ago. According to Villanueva, IPEBA would not be in its current position if it were not for all of the groundwork previously laid by Soluciones Prácticas, which not only developed the *kamayoq* system but – as IPEBA's key strategic partner – also helped to establish the institutional procedures upon which IPEBA was built. There is a sense of resentment in Paca's frustrations, as the conceptual ownership over the *kamayoq* system is lost to an institution that views the *kamayoq* in a singular fashion, often offering little support following certification.

The rapid expansion plan has also placed strains on the limited capacity of Soluciones Prácticas to train and certify increasing numbers of *kamayoq*. To meet SINEACE's demands, Soluciones Prácticas is increasingly seeking new alliances in order to generate the resources that will allow for a greater collective of *kamayoq* – a difficult task, Paca argued, given that there is still a lack of political will to include rural service provision and the *kamayoq* into various programmes. These pressures have subsequently affected the quality of *kamayoq* training, which she feels is increasingly being tailored towards IPEBA's fast-track approach. Ultimately, the *kamayoq* harbour the effects of these pressures: many expressed frustration at some of the institutional and logistical barriers that they have faced during their attempt to acquire IPEBA certification, such as files and records being lost and certificates not being awarded.

Second, the institutional sense of ownership over the concept of the *kamayoq* also creates barriers to other forms of inter-sectoral collaboration. In terms of scaling up certification, it is significant that AMARKAS has been a casualty of IPEBA's rapid expansion plans and their tight regulations for certifying entities. Until recently, AMARKAS was the only other organization in the Sierra Sur – in addition to Soluciones Prácticas – approved by IPEBA as a certifying body; however, conflicts of interest meant that IPEBA refused to renew AMARKAS' status. According to IPEBA staff, AMARKAS was failing to report on its duties and was not actively pursuing the certification programme (thereby failing to meet the necessary deadlines). However, according to Felicitas Pucho Mamani, the President of AMARKAS whose picture appears ironically in the preliminary pages of IPEBA's publication *Saber Hacer en los Andes* (IPEBA, 2012b), IPEBA has favoured Soluciones Prácticas due to its institutional connections and experience in training a particular type of *kamayoq*. Yet such a strong presence by Soluciones Prácticas is creating a split amongst *kamayoq*; while AMARKAS favours a unified approach to training and certifying *kamayoq*, Soluciones Prácticas has continued to scale-up its certification programme in its key programmatic locations.

Loosing AMARKAS as a certifying entity also reflects a shift in control of the unfolding certification system away from the *kamayoq* and their organizations, as central government institutes and transnational NGOs strengthen their hold on the development of the system. In fact, despite adding more certifying entities to its approved list, IPEBA appears to have been folded into SINEACE (along with the other two institutes of CONEACES and CONEAU),

reflecting the desire within SINEACE to ensure that ultimate control of the certification system remains in their hands. If SINEACE is increasingly controlling the evolution of the certification system, questions remain about the balance of power that will be held within the spaces of inter-agency cooperation, as well as at what particular institutional scale such power will be wielded and its effects felt. Indeed, these spaces of inter-institutional cooperation multi-scalar spaces consisting of diverse institutions with variable power and influence over the certification process. The proposed collaboration with a network CETPROs (*Centros de Educación Técnico-Productiva*), for example, could both expand opportunities for *kamayoq* education beyond certification and present a further challenge to the position in the IPEBA system of organizations such as Soluciones Prácticas. As Luis Velásquez – an expert in the department of Evaluation and Accreditation at IPEBA – noted, it is difficult to uphold these forms of institutional co-ordination:

The visions of each institution are different, and perhaps one of the biggest problems we have is not sharing these views or not understanding the magnitude of the process: what this means and the benefits it could have, positioned in terms of improving employment levels, improving levels of equity ... all that. Maybe one thing is missing: understanding the system as a whole, where the commonalities are and what they are. It is critical to have this understanding of what it does overall and how this will benefit not only the few, but be a benefit to all (Velásquez, interview, July 2013).¹⁰²

These unfolding institutional dynamics will affect the strategy of national normalization, to be achieved through the establishment and enforcement of generic standards. They will also have implications for how historic phenomena such as the *kamayoq* will feed into broader programmes that seek to include the marginalized actors, address issues of inequality in power and access to knowledge, and simultaneously increase rural productivity in order to enhance national competitiveness. These so far under-explored implications of the rapid roll out the IPEBA system can be traced back to the National Educational Plan, which established ambitious goals for educational reform without stipulating precisely how such reform would be undertaken. Established for this very purpose, SINEACE has taken control, and it remains to be seen whether the discourse of decentralization will help to produce a grounded process of educational reform based on the needs of rural populations largely excluded from formal

¹⁰² Luis Velásquez developed this point in relation to CETPROs (his area of expertise), which he argued have been abused as an institutional concept by various government agencies because they are particularly flexible and accommodating.

education. Alternatively, will SINEACE's tightening grip reinforce the conduct of conduct that seeks to integrate these rural populations into labour markets and production chains?

Conclusion

In this chapter I analyzed the newly introduced programme of certifying the knowledge and skills of the *kamayoq* according to a nationally normalized framework of knowledge indicators and benchmarks. This programme has instigated a transformation of the *kamayoq* from ethnic experts acting within the ethnodevelopment programmes of NGOs to ethnic entrepreneurial subjects charged with leading by example in terms of employability, being savvy in the market, and capitalizing on new opportunities of upward mobility. The inclusion of Isidro in the Congressional meeting to promote the IPEBA programme is a testament to this vision. This programme fits within a broader discursive strategy that has been developed and refined within centralized institutions of the Peruvian state, and then promulgated and enacted via a network of partnering institutes, agencies, and organs. This combined discursive strategy revolves around: continuous (adult) intercultural and bilingual education with equity; human capital, rural productivity, and competitiveness; a new rurality (or new rural life); and, decentralization.

In framing the national system of certification within these discourses, IPEBA developed a spatially and temporally normalized list of knowledge indicators according to which *kamayoq* competencies could be objectively assessed. This framework, I have argued, acts as a kind of ethnodevelopmental *dispositif*, as it conducts the conduct of 'rural promoters' in general. This process takes on added effects in relation to the *kamayoq*, as it begins to determine *kamayoq* knowledge and expertise according to national standards. The Peruvian state seems to have taken on James C. Scott's (1999) dystopian vision: it is the embodiment of norms, rules, and technical knowledge, which are used to control and improve populations. Conducting the *kamayoq* according to the *dispositif* of knowledge and skills certification creates standardized benchmarks for what it means to be: a) an 'ethnic expert' in a productive realm, and by extension what kinds of knowledge are deemed to be constitutive of an 'expert'; and, b) an expert capable of distributing knowledge and skills according to the 'culturally appropriate' model of *campesino-a-campesino* extension.

These conclusions contrast Soluciones Prácticas' framing of the *kamayoyq* model in terms of Paolo Freire's radical and horizontal pedagogy. While the *kamayoyq* largely embody Freire's 'problem-posing method' of education, their position as professionalized ethnic experts within the ethnodevelopment constellation – and increasingly within formalized state hierarchies of governing education and rural production – means that they are unlikely to produce a radical “pedagogy of the oppressed”. Likewise, the overall rigidity IPEBA of the IPEBA system, and its function as a *dispositif*, contrasts notions such as *iskay yachay* – the reciprocity of multiple knowledges advocated by Grimaldo Rengifo and PRATEC as a way to establish cultural diversity and educational plurality. Compare, for example, my analysis of the *kamayoyq* in the dissertation so far, to the models of rural modernization and cultural assimilation the proposal of cultural diversity presented in **Table 5**; while it is difficult to place the *kamayoyq* squarely into either column, their contemporary revival so far does not seem to meet Rengifo's expectations.

Where, then, does this leave attempts to build further on the *kamayoyq* model, to open up more opportunities and to lend the *kamayoyq* power and autonomy in shaping Andean worlds? Is there a way of countering the processes of instrumentalizing the role of the *kamayoyq* with a more culturally embedded vision of how the *kamayoyq* might contribute to diverse forms of intercultural educational reform and transformations in relations of production? While I tackle the issue of diverse socio-economies in practice in the next chapter, here I end the chapter with some reflections on how the IPEBA system (or an IPEBA-like system) might be re-oriented towards diverse pedagogies and relations of production. Such a re-orientation means establishing a more dynamic institutional architecture that halts the increasing centralization of functions within SINEACE, and instead emphasizes a more spatially attentive, contextually appropriate, and historically grounded way of recognizing and valuing knowledge. An active component of a knowledge certification system, for example, could be the construction of an institutional space designed specifically for the generation of non-Eurocentric and decolonial thought, including by making principles such as *iskay yachay* an explicit focus. Likewise, the Andean breeding calendar is included in the functional map for the reproductive management of camelids (see appendix 4); why is the functional map not built around this breeding calendar, instead of simply incorporating it and measuring it according to externally conceived indicators? Building the certification system around these components would help them

flourish, enabling them to re-affirm *kamayoq* knowledge rather than being treated as a cultural resource for gaining employability-enhancing certificate.

Instead of building the IPEBA system on Westernized assumptions of what educational reform should entail and what its role should be (increased productivity, employability, decentralization, and a new rurality), a more dynamic system would build out, horizontally from locally defined priorities in terms of knowledge and agrarian production. As Catherine Walsh (2010b, p. 88) argued, such approaches are capable of constructing more “systematic articulations and bridges among intellectual, political, and ethical projects”, which can lead to “epistemological and educational restructuring and intervention” based on new critical and decolonial projects. A horizontal, diverse, and plural system of recognizing the *kamayoq*, and one based on a deep historical understanding of their role in Andean societies, can help establish new spaces and communities of thought and action, rather than simply insert them as ‘culturally appropriate’ others within re-worked forms of state governmentality and Western development intervention.

In the remainder of the dissertation, therefore, I explore this kind of potential of the *kamayoq* in the context of re-organizing socio-economic and human-nonhuman relations. First, I turn to the notion of ‘Andinidad’ – the Andean way of doing things underpinned by the ‘sacred’ values of reciprocity, collective ownership, and communal ownership. I explore the role that the *kamayoq* play in re-emphasising these components *alongside* market exchange as the increasingly dominant form of economic integration in the Andes. Finally, in chapter seven, I explore the socio-cultural ties between the *kamayoq* and symbolic components of Andean life – particularly to alpacas as an embodiment of Andean culture and productive systems.

SIX

‘ANDINIDAD’:

KAMAYOQ, ‘SACRED’ ANDEAN VALUES, AND DIVERSE ECONOMIES

IN THE MAKING

So far in the dissertation, I have charted the shifting role of *kamayoq* and their relation to broader structures and environments. While their technical expertise upheld forms of political-economic integration under the Inka, the contemporary form of the *kamayoq* cannot be divorced from complex, multi-scalar networks of globalized development, and from the subsidiary paradigm of ethnodevelopment. These effects of this position are uneven, and they are increasingly so as new government programmes attempt to transform the ethnic expertise of the *kamayoq* into a form of ethnic entrepreneurialism. In this chapter, I broaden the discussion to tackle some of the conceptual implications of the revival and re-institutionalization of the *kamayoq*. I address their role in tying together what have been described as sacred components to Andean collective life: reciprocity, collectivism, and communal ownership. Empirically, the chapter sheds light on the effectiveness of these components in contemporary Andean communities, pointing to the variable and contested ways in they are integrated (with the help of the *kamayoq*) within broader processes of economic restructuring in the region. As such, the chapter also cycles back to the notion of economic integration, reinforcing my argument that the *kamayoq* have been a fundamental institutional component to combined strategies of integration.

I begin with the importance of reciprocity to Andean communities, contextualizing the *kamayoq* within accounts of Andean reciprocal relations such as *ayni* and *minka*. I illustrate how contemporary *kamayoq* internalize different articulations of symmetrical and asymmetrical reciprocity. I then turn my attention to the components of collectivism and communal ownership, paying particular attention to cooperative production (amongst *alpaqueros*) and associated reproduction (amongst *kamayoq*). To illustrate the uncertain form

and function of these forms of collective socio-economic organization, I draw on the notion of a ‘collective fix’ – a concept that combines Marxist-inspired readings of agrarian change with recent attention to how previously marginalized populations are governed so as to simultaneously ensure their contribution to processes of accumulation and protect them from the harshest effects of market participation (thereby ensuring their *continuous* contribution). I conclude with reflections on the significance of this reading for how we understand the contemporary revival of ‘traditional’ forms of socio-economic organization, how these forms intersect with broader structural changes, and the degree to which this inter-section produces unique and diverse (albeit hybridized and inter-connected) forms of economic practice.

The Andean way of doing things and the ‘old’ idea of the commons

“Profound” forms of social organization – based on the “sacred” values of reciprocity, collectivism, and communal ownership – have been used as categorical descriptors of the uniqueness of Andean life and Andean ways to escape poverty (Andolina et al., 2009, p. 56; Argumedo & Pimbert, 2010, p. 344). These values are deemed ‘sacred’ by virtue of their ties to the dualities that underpin Andean philosophy: reciprocity, for example, exists because there must always be an opposing force in inter-personal relations and transactions (I expand on these philosophical underpinnings in chapter seven). Forms of association through these mechanisms are therefore an everyday part of Andean life. Associative and collective decision-making structures the organization of Andean communities, which revolve around the general assembly (de la Torre Postigo, 2004; Mayer, 2002). There are also usually associations and committees for every need, from associations of women’s dairy producers and artisans of alpaca wool products, to committees of folklore, livestock rearing, irrigation, health, and *rondas campesinas* (which still exist to defend the communal territory from outside encroachment (Mayer, 2002), despite the official defeat of terrorism more than a decade ago). Perhaps for these reasons, Enrique Mayer concluded that “the capacity to act collectively is the most outstanding characteristic of Andean households” (Mayer, 2002, p. 34).

The point of this chapter is not to romanticize or trivialize this part of Andean life. Neither is it to measure these components according western notions of community (which might posit that the presence of these associations confirms the existence of a strong community). In

exploring the notion of *Andinidad* – the “Andean way of doing things” – Annelies Zoomers (2006, p. 1043) argued that while there is a multitude of “Andean ways”, Andean people are often concerned with *individual* ways to survive and escape poverty, as much as they are with struggling to maintain their indigenous and collective values. Julia Hinostroza – former manager of *Escuela de Kamayoc* – lamented that rather than being utilized, these Andean organizational systems have been lost to the destructive tendencies of modernity: “until now there were communal lands, which were beneficial for all, not for the benefit of just me...I tell you, modernity: it beats all of you; it breaks everything that was so well organized to create something that has neither head nor tail (interview, August 2011).

The reality of Andean life is somewhere in between these narratives: neither a romantic incarnation of the collective ideal, nor a dystopian present of eroded historic roots. As agents of technical extension *and* cultural reproduction, *kamayoc* have the potential to uphold and strengthen Andean ideals of collective life, communal resources, and territoriality. However, they simultaneously integrate Andean resources and livelihoods into broader systems of governance and the market economy. As I explored in chapter four, the way in which this tension unfolds creates a particular, uneven topography of developmental effects often ignored within claims of cultural appropriateness. In this chapter, I focus more explicitly on the ways in which the *kamayoc* contribute to re-affirming the ‘sacred’ Andean values of reciprocity, collectivism, and communal living.

Exploring these issues means paying attention to debates around the efficacy of ‘community’. Within the discipline of geography, the notion of community resurfaces from time to time, only to be scolded by a two-fold critique that sees the instrumentalization and co-optation of the community within paradigms understood to be inimical to collective life (e.g. neoliberalism), as well as the ways in which these paradigms play out across the globe to undermine communities and collective efforts. Neoliberalism reflects both of these elements, as it embeds the notion of individual responsibilities, and yet also internalizes narratives of the community in order to entrench the idea that ‘there is no alternative’ (for informative discussions in this context, see: Bakker, 2008, 2010b; Jones, 2003; Panelli & Welch, 2005; Staeheli, 2008a, 2008b). The result is that critiques of the community and how it can be enrolled in spaces of neoliberal governmentality and capitalist development are now fairly common-place (e.g. Bakker, 2010b; Watts, 2006). These critiques have often focussed on the outcomes of community-oriented discourse, arguing that they fail to live up to their own

expectations of challenging state-led projects of neoliberalization. Less attention is paid, however, to the logics that have historically underpinned notions of community: communal ownership, collectivism, and reciprocity. By exploring how these components shape everyday realities, I focus my analysis not on communities, but on the use of these characteristics by various institutional actors, at (and across) various scales – use that is, at times, instrumental but which can also support localized networks that prevent a wholesale reduction to neoliberal logics. In fact, these elements seem poorly understood, as terms such as ‘community’, ‘collective’, and ‘commons’ are used interchangeably both by critics and advocates of collective responses to common problems.

A recent special issue of the *Community Development Journal* was dedicated to this issue, and to the theme of thinking in new ways about the ‘old’ idea of the commons (McDermott, 2014). The publication of the issue is a reminder that all things common – the commons, communality, communities – remain an important and lively field of investigation. In that issue, however, Maria Mies (2014) argued that there is no commons without a community, basing her argument around a romanticization of a moral economy that managed common land effectively and collectively in her childhood pastoral community in the Rhineland. While optimistic about revived interest in the commons, Mies’ approach ultimately reflects an inherently western view of what common life should look like and how it should be organized – a view that places the notion of *Gemeinschaft* (personalized social ties with informal rules and norms, often translated as ‘community’) into tension with that of *Gesellschaft* (indirect inter-relations and impersonal roles, often established through mutual consent but which may undermine the personalized ties of *Gemeinschaft*) (Weber, 1968).

In this chapter, I illustrate that the ties between community and communal living (including relations of reciprocity and collectivism) cannot be considered directly causal; neither are indirect relations necessarily inimical to community formation. Elsewhere in the same special issue, Gustavo Esteva usefully pointed to the diversity of social and institutional forms that emerge around varying conceptions of the commons within “autonomous centres for the production of knowledge” (Esteva, 2014, p. 155). New autonomous units of *comunalidad* (communality), for example, reflect ways of life and governance for diverse human groups (often indigenous), which have reclaimed and are regenerating traditional ‘commons’, lending them a contemporary form outside the realm of modern individualism. By contrast, the ‘new commons’ reflect a contemporary sociological creation of western or

westernized individuals, expressing their discontent with the industrial mode of production and capitalism (Esteva, 2014). These different groups ground themselves in the notion of the commons in varying ways, building contextual relations of commonality – a perspective that builds on Esteva’s earlier work of illustrating the multiplicity of ways in which people are re-rooting themselves in the face the uprooting pressures of globalized development (Esteva & Prakash, 1989).

Understanding how these contextual relations of commonality are institutionalized means returning to Polanyi’s approach to integrated economies, and to the notion that particular forms of embeddedness are always “specifically related to the type of social relationship involved” (Polanyi, 1977, p. 55). In chapter three I laid out the broad forms of social relationship that become instituted according to broader structures: reciprocity, redistribution, and exchange. Polanyi added the fourth “historically important” (1958, p. 330) category of householding, yet he was far less explicit in outlining how it fits within the “instituted process” (Polanyi, 1957a, p. 248) of the substantive economy.¹⁰³ Historically, the *kamayoaq* have been grounded by the category of householding and they have performed the function of integrating land and labour – “the two elements on which the dominance of forms of integration essentially depends” (Polanyi, 1977, p. 43) – into the economy; this relation continues today, as I explained in chapters four and five. However, my interest in this chapter is to explore the link between the ‘sacred’ Andean values of reciprocity, collectiveness, and communal ownership, and their functioning today within an embedded economy of the Sierra Sur. I will therefore address the balance between reciprocity and exchange – as instituted processes, rather than individual behaviour traits.

However, Polanyi was also interested in the idea of community. He interrogated how he nineteenth century German sociologist Ferdinand Toennies’ “idealized ‘community’ as a condition where human beings are linked together by the modern tissue of common experience, while ‘society’ was never far removed from the impersonability of the market”

¹⁰³ In discussing Polanyian forms of economy, I am always referring to his substantive definition of the economy, rather than a formal definition. While the latter focuses on means-ends relationships (such as how supply and demand might affect production), the former grounds economic processes within institutional structures and “man’s patent dependence for his livelihood upon nature and his fellows. He survives by virtue of an institutionalized interaction between himself and his natural surroundings. That process is the economy, which supplies him with the means of satisfying his material wants” [*sic*] (Polanyi, 1977, p. 20). While the formal definition dominates neo-classical economics, critical political economy largely revolves around a substantive definition.

(Polanyi, 1977, p. 49). He also explored how Sir Henry Sumner Maine – a British historian – dealt with the survival of communal forms according to the history of law. Neither of them, Polanyi argued, applied their insights to the economic institution of trade, money, and markets – a task that was eventually taken up by anthropologists in the early twentieth century (Polanyi, 1977). Building on this work, Polanyi designed his approach to uncover how “the production and distribution of material goods was embedded in social relations of a noneconomic kind” (Polanyi, 1977, p. 51).¹⁰⁴ His analysis in *Livelihood of Man* ultimately weaves together reciprocity, communal solidarity, redistribution, and market exchange under different, politically organized forms of economic integration. The particular and contextual combination of these components creates “a distinctive type of political economy” (Polanyi, 1977, p. 166).

My task here, therefore, is to explore the degree to which a form of re-instituted *Andinidad* (reciprocity, collectivism, and communal ownership) might underpin a distinctive political economy.¹⁰⁵ In undertaking this task, I aim to contribute to similar debates on the intersection of indigenous economies, autonomy, and market-based self-governance. Rauna Kuokkanen (2011a), for example, has pointed out that theories of dependency used to explain forms of ‘welfare colonialism’ often fail to develop the kind of complex dialectic of development and underdevelopment that is required to fully understand the incorporation of indigenous communities and economies into global capitalism. Indeed, indigenous communities faced with conditions of exclusion have begun to explore strategies of self-governed neoliberal economic development, and yet very little attention has been paid – she argued – to the intersection of indigenous and market, which often entails the restructuring of key institutions in Indigenous communities. A potential solution, she argued elsewhere, is to view indigenous economic systems and subsistence activities as part of indigenous governance strategies that seek to develop plural forms of social economy, which embed guiding

¹⁰⁴ Here we see some overlap between Polanyi and contemporary debates surrounding community, social, or solidarity economies. For overviews of these concepts and debates, see: Gibson-Graham (2006); Amin (2002) and Bridge (2009); and Allard (2008), respectively.

¹⁰⁵ Given that redistribution is not deemed a defining characteristic of *Andinidad*, and the fact that neoliberal markets have largely displaced the centralized redistribution of goods in Peru, I do not tackle redistribution explicitly in this chapter. The function of Cusco as a central polity for governing redistribution was explored in chapter three. In a contemporary sense, however, it is interesting that the central organs of the Peruvian state have returned to govern the redistribution of knowledge and human capital (capacities, employability, etc.), even if not material goods (see chapter five).

principles such as cooperative subsistence, reciprocity, sharing, and consensus without detaching them artificially from broader markets (Kuokkanen, 2011b). I contribute to these emerging debates by illustrating the ways in which the *kamayoq* and the notion of *Andinidad* contribute to the emergence of a multiplex of Andean social economies.

In this chapter, I therefore illustrate some of the context and specificity that was alluded to by Esteva, but I also illustrate that formulations of communality are not always entirely inimical to what he described as ‘modern individualization’. Rather, as the term *Gesellschaft* implies, people sometimes act together for personal needs and gains. In Polanyian terms, this means paying attention to the ways in which instituted forms of reciprocity and communal solidarity operate alongside – and are often instituted in concert with – neoliberalized forms of market exchange and individualism.

Kamayoq, the Andean community, and shifting relations of reciprocity

Contemporary Andean communities are partly a product of the 1969 Agrarian Reform, which established a series of worker-managed co-operatives. The larger variants were known as Agrarian Societies of Social Interest (*Sociedades Agrarias de Interés Social, SAIS*), while smaller areas were adjudicated to individual peasant communities barred from dividing up the land. Groups not belonging to a specific community were labelled *grupos campesinos*, or peasant groups, in the hopes that they might organize themselves into a cooperative or peasant community (Mayer, 2009). Following two failed rounds of Agrarian Reform (1975-1985), the cooperatives began to collapse, many evolving into *comunidades* (communities) of *grupos campesinos*. The story of Agrarian Reform in the Sierra Sur was therefore characterized by Enrique Mayer with the phrase “from hacienda to community”, as large, privately owned ranches eventually gave way to communities that were managed according to collective decision-making mechanisms (assemblies) and communal property regimes, which stood in contradistinction to individual, private property rights (Mayer, 2002; 2009, p. 31).

As Mayer (2009, pp. 153-154) pointed out, the term ‘cooperative’ was something of a misnomer, as the military government’s attempt at a “revolutionary transformation of the countryside” merely consisted of lumping people together into one unit that was spread far and wide over multiple districts, and then telling them to “cooperate”; it was really a euphemism for compliance. These cooperatives therefore did little to resolve existing conflicts within or

between communities, and while the rhetoric of participation led to the creation of many councils and committees, most peasants “developed an indifferent if not downright hostile attitude toward the cooperative” (ibid.). The developmental effects of the Agrarian Reform cooperative therefore did little to uphold its name: land was concentrated in the hands of established elites while power and decision-making was centralized, helping to reinforce state control of the peasantry rather than establishing an autonomous worker-managed institution.

It is perhaps unsurprising, then, that Andean communities do not function according to the romantic ideal of harmonized reciprocity, collectivism, and communal ownership. According to Marisol de la Cadena (who’s account is summarized by Mayer (2002, pp. 37-39)), Andean community households cooperate by necessity, as each is unable to perform all of the necessary agricultural tasks. As I pointed out in chapter four, such cooperation often occurs through institutionalized supra-household linkages, for which the *kamayoq* contribute a major role as they are able to help prevent cooperation from damaging individual households; i.e. in an ideal form, they help to ensure that reciprocal arrangements remain on an equal basis. As forms of cooperation become organized and institutionalized (the case of the *kamayoq* being one example of maintaining knowledge cooperation), de la Cadena argued that cooperation becomes an issue of membership in various groups, of which there are three different levels (or scales): the basic household; a group of closely cooperating households organized along kinship lines; and a series of formalized groups such as subdivisions of the community, voluntary associations, and interest groups, all of which integrate within the form organization of the broader community. As I explored in chapter four, forms of division and conflict emerge amongst and between these groups, pointing to the ways in which cooperation can be organized around intra-community class relations. Despite cooperation, Andean communities are also characterized by a large middle class, which rarely controls power within a community despite having access to land and markets. Rather, at the top of the ‘class diamond’ is a dominant class of wealthy households, which control a large majority of land and other resources, as well as disproportionate access to commercial links, which they use to consolidate their elite power base (Fonseca, in Mayer, 2002).¹⁰⁶ As I illustrate later in this

¹⁰⁶ This ‘class diamond’ refers to the fact that historically there has been a large group of middle peasants in the Peruvian Andes, which provides an important supporting function for community institutions but rarely controls power. The ‘broken’ households below the middle group are small in

chapter, this structure continues to shape the ways in which cooperation – such as through associated production or associations of knowledge distribution – unfolds in relation to broader political-economic structures.

Andean communities are nonetheless “institutions that manage a commons for the constituent households” (Mayer, 2002, p. 39). At the centre of this institution is the communal governing body, the general assembly, and increasingly the annual process of participatory budgeting. Feeding into these components are multiple forms of associated production and communal organization, from associations of women’s dairy producers and artisans of alpaca wool products, to committees of folklore, livestock rearing, irrigation, health, and *rondas campesinas*. Later in this chapter, I focus on associated production (associations of alpaca herders) and associated reproduction (associations of *kamayoq*) to illustrate Mayer’s assertion that these communal or collective institutions are often less effective than many of the participants themselves expect, meaning that these institutions often break down. (I hinted at some of these issues in chapter four, when I introduced some of the conflicts that plague associations such as AMARKAS – the Regional Association of *Kamayoq* in the Sierra Sur.) Enrique Mayer suggested that it would be interesting for future Andean scholars to explore “why there has been an expansion of collective organizations that respect the autonomy of the household” (Mayer, 2002, p. 42). In this chapter, I contribute a study of why and how collective organization is expanding, but I also question whether such organization simultaneously respects the autonomy of the household. Instead, I suggest that contemporary forms of collective organization reflect the shifting position of Andean households and community-based instituted processes (including the *kamayoq*) vis-à-vis broader structural changes. Increasingly, households are being asked to participate in forms of organization that integrate Andean household economies into broader political economies, largely oriented around market exchange. There is an unfolding pattern of communitarian or collective economic integration – a notion that I expand upon below, and which I link back to a Polanyian perspective on instituted economies. First, however, it is worth elaborating how the rules of the game, which underpin collective organization and Andean community life, are also shifting in their relation to the predominance of market exchange.

number due to various safety-net functions, while the powerful elite is typically a small group due to a disproportionate access to land and resources among a minority (Mayer, 2002).

At the core of the rules of the game is the notion of reciprocity: “the continuous, normative exchange of services and goods between known persons, in which some time must elapse between initial prestation and its return” (Mayer, 2002, p. 105). Although reciprocity is evaluated according to some kind of moral or normative standard – often culturally defined, customary rules and norms – it can unfold as an unequal relationship that reflects existing differences in status and power. Mayer characterized these kinds of relationships as asymmetrical reciprocity, personified in the Andes by *minka*.¹⁰⁷ The donation of labour, for example, to the needs of another person or household may be rewarded with the return of a small quantity of goods or with a meal. However, while “being fed might have been an expression of generosity that enhanced the giver, it also diminished the receiver” (Mayer, 2002, p. 110), partly because according to Andean philosophies, everything must be balanced by an opposing force and a meal is not considered an opposing force for donated labour. *Minka*, then, is an incomplete relation of *ayni* (symmetrical reciprocity), which includes an equivalent return for a service: a service is “performed in exchange for exactly the same service in the context of work, ceremony, even everyday mutual help” (Mayer, 2002, p. 110). In this case, the oppositional forces are balanced.

Polanyi would likely have agreed with these Andean philosophies of equivalencies and balance, since solidarity in the economic field, he argued, is maintained through institutions that ensure “noncontentious dealings with food” (Polanyi, 1977, p. 60). The above example of *minka* entailed what Polanyi called a ‘quasi-taboo’, as it included “gainful transactions in regard to food” (ibid.). Moreover, for Polanyi, reciprocity always had to be symmetrical, even if it was not based on mutuality. Reciprocity could only serve the function of integrating the economy if “symmetrically organized structures, such as a symmetrical system of kinship groups, are given” (Polanyi, 1957a, p. 251), and if they proceed according to socially established equivalencies. “Only in a symmetrically organized environment”, he concluded, “will reciprocative behaviour result in economic institutions of any importance” (Polanyi, 1957a, p. 252). Only *ayni*, therefore, could function in a way capable of supporting an institutionalized form of economic integration on reciprocal terms. To what extent does *ayni*

¹⁰⁷ *Minka* is distinguishable from *trueque*, which translates roughly as ‘barter’. *Trueque* is an exchange relation involving goods for goods, while *minka* is an asymmetrical reciprocal relation involving labour for goods.

exist today as an instituted form of organization, and in what ways do the *kamayoq* uphold this relation?

Three examples from my fieldwork may help to elucidate the shifting position of the *kamayoq* in relation to these rules of the reciprocal game, and the ways in which they are instituted at the community scale. First, in the community of Mollebamba (in Antabamba, Apurímac – see figure 3 in the introduction), *kamayoq* still perform a role akin to the kinds of rotational stewardship that underpinned pre-Inka societies of hydraulic agro-pastoralism (see chapter three), and to the kind of *carguyoc* (individuals within the *ayllu* with specific, rotational responsibilities) identified by Grimaldo Rengifo (1998). Every year, a group of *kamayoq* is selected to oversee the potato crop for a six-month period, when the potatoes are most prone to pests and ground frost. This role ensures that each household can continue with their everyday tasks, while also being secure in the knowledge that their potato harvest will not fail. The reciprocal relation enters not through remuneration with goods (such as potatoes), but when the previously receiving households are called upon to contribute an individual to the new group of *kamayoq*. The reciprocal loop could be completed the following year or any year thereafter; the time scale is irrelevant so long as each household contributes to this process of collective management. The relation therefore represents a community-wide and symmetrical form of *ayni* (as labour is exchanged for the exact same form of labour), which is conducted according to the established rules and norms of the community that persist over time. This function of the *kamayoq* is therefore an instituted form of reciprocity that persists today as a way of governing labour and the production of crops, and yet without involving the potatoes in gainful transactions.

Second, the form and function of the *kamayoq* that I have focussed on in this dissertation revolves around an event of practical knowledge exchange. The labour being expended here is both that accumulated in the knowledge itself and that expended directly through the act of practical demonstration. Three kinds of relations follow. First, as has been customary, many of the older generations of *kamayoq* indicated that they expect no kind of remuneration at all, but equally that they would happily engage in other forms of reciprocity with the receiving campesino/a and his/her family and extended networks. This may include the return of other kinds of knowledge or the provision of similar services (such as lending practical labour or animals), thus reflecting a reciprocal relation of *ayni* (while meals may also be exchanged

during the knowledge sharing process, these do not undermine the *ayni* relation so long as the reciprocal return is eventually equal).

The second relation refers to the fact that *kamayoq* have tended to accept direct payment in kind, such as with food or clothing – a relation of *minka*, since the relation is ‘closed’ but without the return of the same quantity and /or quality of labour. Under the Inka, the *kamayoq* similarly received goods and a labour-tax free status in return for expending their expert labour, suggesting the existence of a kind of macro-institutional *minka* relation. These asymmetrical relations blur the boundary between reciprocity and redistribution as the mechanism of integration and the community scale. Third, most recently, younger generations of *kamayoq* have been seeking monetary remuneration for their services; this shifts the *kamayoq-campesino* relation away from one of reciprocity, and towards one of direct exchange, thus connecting both participants to the broader trajectory of relying on market exchange as the principle form of economic integration.

The final example of how the *kamayoq* engage in shifting relations of reciprocity builds on the previous point of their integration with broader political-economic structures. From the initial call for participation launched by Soluciones Prácticas in search of potential *kamayoq*, to the final day that a *kamayoq* ‘graduates’ from *Escuela de Kamayoq*, training and capacity-building in workshops requires that participating *campesinos* give up a day of their labour, which could be spent conducting necessary productive and reproductive activities. In return, the participants are fed at a local eatery. This meal usually consists of a typical two-course Andean *almuerzo* (a lunch of soup or *caldo* (a watery, broth-like soup) followed by a typical main course); it is therefore both a negligible cost for Soluciones Prácticas, and insufficient compensation for giving up a day’s labour. At this point, then, the relation ‘diminishes the receiver’, and it has even been used as material for stigmatizing participating *campesinos* on the basis that they only attend the workshops for the free food (see chapter five). There is also the question of what kind of Polanyian “gainful transaction” emerges from this event, with Soluciones Prácticas likely gaining in the long term with extended programme funding.

For the participants that do not complete the *kamayoq* training, this relation may continue to be defined as an irreversible form of *minka* (for Mayer, *minka* could be either reversible or irreversible). For the participants who do graduate, however, this relation may be transformed over time into the complete, symmetrical reciprocal relation of *ayni*. Upon graduation, the meal is no longer the primary means of exchange; rather the labour of the participants in the

workshops has been exchanged for the labour of Soluciones Prácticas in training and certifying the *kamayoq*. There is mutual benefit: *kamayoq* benefit from livelihood improvements and a change in status; Soluciones Prácticas gains from the successful graduation of *kamayoq*. Ultimately, this gain for Soluciones Prácticas is partly monetary (in the sense of securing further funding), but it is also expressed in the indirect return of the ‘meal’ previously provided to the participants. This does not happen literally, but in the form of increased production levels, enhanced access to exchange markets, and therefore greater insertion of surplus production into the broader market; Soluciones Prácticas therefore succeeds in its remit of enhancing access to markets amongst rural communities and of entrenching market exchange as the dominant form of integration – all while ostensibly engaging with the established rules of the game in Andean communities.

In all three examples, the relations are clearly instituted, rather than simply individual traits (what Polanyi called personal behaviours). The first has been instituted across time at the community scale and has become established annual practice; the second reflects the long tradition of labour *ayni* and yet also reveals how *ayni* may intersect with new kinds of exchange interests; the third occurs according to the intersection of established Andean rules of the game and new forms of institutional process associated within international NGOs and development assistance.

However, these examples also illustrate the problematic nature of assuming a timeless continuity to community institutions and communal participation, as Gavin Smith (1991) did in his book *Livelihood and Resistance: Peasants and the Politics of Land in Peru*. Smith did acknowledge that the insertion of local social relations into dominant society has the effect of transforming the former, and that the effectiveness of the direct, inter-personal relations underlying communal institutions in part derives from the interplay of traditional (orthodox) meaning and contemporary (instrumental) practice, as well as the fact that acknowledging this very distinction between traditional and contemporary ultimately serves to devalue reciprocity. Dominant society preserves the established institutions and rules of the game to a degree sufficient in enabling the continuation of that society for the purposes of subversion and exploitation. As I briefly alluded in chapter three, this is what happened both with the emergence of the Inka state and with the arrival of the Spanish. While there appear to be threads of institutional continuity evident in the existence of communal relations (*ayni* is still common practice, for example), the above examples illustrate that these relations themselves

are changing, and they are doing so in ways that increasingly exploit their congruence with market exchange and individual interests. Rather than simply resist marketization and neoliberalization, the reciprocal components of Andinidad exist alongside and reshape how (market) exchange fits within a potentially distinctive type of political economy in the Andes; that is, an economy that is embedded in social relations of a non-economic kind that are institutionalized *across* different kinds of economic governance and integration.

Charting how economic processes are grounded within these kinds of institutional structures can help to build an understanding of diverse, substantive economies in practice in the Peruvian Andes, without resorting to the ‘economistic fallacy’ of free markets or to the ‘collectivist fantasy’ of anti-market alternatives (Hann, 2014; Polanyi, 1977). This approach therefore addresses the issue of “how to institutionalize substantivist mixed economies which allow individuals and households appropriate space for ‘economistic’ behaviour in markets to meet some of their needs, without indulging the fantasy that reduces human motivations to utility maximization and socio-cultural complexity to a generalized market rationality” (Hann, 2014, p. 626). In what follows, therefore, I explore the role of collective organization in the form of associated production and reproduction, but before tackling this issue directly, I first zoom out to address how Andean forms of collective social organization fit into broader pictures of political economic change in the region. While a tension exists in all economies between market forces and calculative reason on the one hand, and a community-oriented ‘base’ on the other (Hann, 2014), locating this tension within the contextual processes of change in the Andes helps to ground an exploration of diverse socio-economies in practice. To do so, I draw attention to debates around the potential for decolonizing Andean development through the recovery and recognition of collective and communal organization, and the contrasting perspective that such a politics of formal recognition merely inserts these forms of organization into the broader neoliberal paradigm of development.

Reviving Andean ‘communal solidarity’: a ‘collective fix’?

In presenting a manifesto for Andean decolonization, Eduardo Grillo (1998a, 1998b) – co-founder of the Andean Project of Peasant Technologies (PRATEC) – placed the regeneration

of the *ayllu* at the centre.¹⁰⁸ As I elaborated in chapter two, Grillo cast decolonization as an autonomous process of Andean cultural affirmation, which is oriented around notions such as *allin kawsay* (living well) and *iskay yachay* (reciprocal knowledge exchange). These concepts and practices help to produce multiple suggestions and possibilities for nurturing life, rather than reproduce the technical manuals associated with Western development (Ishizawa Oba, 2013; Rengifo Vasquez, 2008b). The significance of this reassertion of Andean worlds and worldviews is reflected in the fact that scholars elsewhere have also been paying increasing attention to the potential for reviving Andean forms of cultural and socio-economic organization. The recognition of *Pachamama* (Mother Earth) in Ecuador's constitution, for example, has been cited as an example of attempts to decolonize institutional arrangements (Walsh, 2010a). Similarly, *sumak kawsay* ("living well") has been explored as a counter-hegemonic alternative to neo-extractivist, capitalist development (Gudynas, 2011, 2014; Hidalgo-Capitán & Cubillo-Guevara, 2014; Hidalgo Flor, 2011; Walsh, 2010a). While the re-application of these concepts by indigenous movements remains fraught, Elena Pardo (2013) – of the Cusco-based institute CEPROSI (El Centro de Promoción del Saber Indígena/The Centre for the Promotion of Indigenous Knowledge) – argued that notions such as *sumak kawsay* and *allin kawsay* reflect the first time that philosophies of co-existence have begun to make sense in political debates. This confidence echoed Marisol de la Cadena's (2010) illustration of how indigenous movements have conjured 'sentient entities' in political debates, thereby illustrating how indigeneity exceeds notions of politics as usual and proposing an ethnic politics that offers a different form of political praxis.

At the centre of these politicized forms of Andean culture and indigeneity remains the *ayllu*. *Sumak kawsay*, for example, assumes a reciprocal relationship among the three *ayllus* of Pachamama: *Runa Ayllu* (the community of human and domesticated nonhuman species), the *Sallka Ayllu* (the community of 'wild' species) and the *Auki Ayllu* (the community of the sacred). *Sumak kawsay* therefore reflects the material and spiritual basis upon which to build harmony among these three *ayllus* and establish "a rich and deep economic solidarity based on

¹⁰⁸ Recall that the *ayllu* is an Andean form of social organization often simplistically equated to the western notion of a community, which in fact affiliates diverse human and nonhuman social groups, and involves mutually reinforcing administrative, ritual, and economic practices (Orta, 2013). Grimaldo Rengifo (1998) went further to suggest that it is in fact a self-reproducing yet diverse entity that exists in direct opposition to Eurocentric, colonial, and anthropocentric notions of homogenous community forms.

diversity, equity, self-management, ecological balance, and principles for economic efficiency” (Argumedo & Pimbert, 2010, p. 344). This centrality of the *ayllu* has caused scholars to explore whether it can ensure that the sacred Andean values of reciprocity, communal ownership, collectiveness, and co-operative co-existence can at least operate alongside and potentially challenge the hegemony of market exchange (Ishizawa Oba & Rengifo Vásquez, 2007; Marglin, 2000).

Yet in contrast to Rengifo’s (1998) assertion that the *ayllu* has always maintained a complete resistance to external pressures, colonial or otherwise, critical attention to the contemporary significance of the social institution has explored whether it fits into “precocious experiment with [neoliberal] multiculturalism as containment” (Hale, 2011, p. 190). In the Ecuadorian context, Juliet Erazo (2013) argued that the recognition of indigenous collective organizations in Ecuador reflects a paradox for both indigenous identities and development, since formal recognition comes with a new set of expectations and responsibilities for governing populations and acting in defence of sovereignty, creating new subjectivities in the process. Indigenous forms of “organized living”, while based on ideals of *ayllu* collectiveness, in fact entrench modes of leadership that cultivate participation in continued development programmes (Erazo, 2013, p. 95). Thus, in Erazo’s case, the shift towards a territorial, collective economy was not as dramatic as it first appeared, as the members of *ayllu* cooperatives became disenfranchised with governmental forms of leadership, ultimately establishing their own sub-centre organizations that were smaller than the central cooperative and yet larger than traditional kinship groups. Importantly, however, internal conflicts do not necessarily signal a lack of territorial citizenship, and in Erazo’s Ecuadorian case, forms of territorial solidarity and governance were able to emerge from a troubled history of limited participation, disagreements, and internal conflicts (Erazo, 2013).

These accounts hint that the sacred values of Andean collectivism and communal living struggle to escape the colonial bonds a Western ‘architecture of development’ (singular utopian visions, unequal power, systemic poverty, and the imposition of Western order), which Grillo was adamant could be discarded (see chapter two). The wave of titling collective lands in the wake of the ‘territorial turn’ and the associated recognition of indigenous territorial rights by the International Labour Organization, for example, have come under

scrutiny.¹⁰⁹ Anthias and Radcliffe (2013) described the results of titling TCOs (*Tierras Comunitarias de Origen*; Community Lands of Origin) in Bolivia as a patchwork (variegated) space of collective, private, and undefined property rights, where neoliberalism (inevitably) operates alongside and often in articulation with indigenous cultural practices. How, then, can we reconcile attempts to decolonize development through the revival and re-inscription of Andean cultural values and forms of social organization, with the localized effects of a global paradigm of neoliberal development often capable of internalizing potential challenges within its expanding social remit? How might a Polanyian reading of socially and institutionally embedded economic practices help to understand the mutual co-existence of Andean socio-economic organization and neoliberalized markets?

In what follows, I address these issues by building on Tania Li's (2010) use of the term "communal fix", which she used to argue that the formal recognition of indigenous collective governance mechanisms has been a long-lasting strategy of colonialism, as it separates individual land owners capable of functioning as competent market subjects from groups of people deemed in need of protection from the dispossession and resource degradation. I draw on this body of work because the conceptual framings that I have deployed thus far struggle to explain the dynamics of collective economic organization in the Southern Andes. Ethnodevelopment alone, for example, cannot fully expose the market and non-market rationales that are embedded in collective organization as a somewhat quotidian component to Andean life. Li's conceptualization therefore has some merit, but it requires some refinement and contextualization for the case of the southern Andes in Peru.

Conscious that I am introducing yet another 'fix' to the critical geographer's vernacular, it is worth clarifying my use of "collective fix", which builds on a not entirely reconcilable interdisciplinary use of 'fixes'. For David Harvey, the 'spatial fix' characterized the tendency for surplus capital to be absorbed in spatially fixed forms, thereby working as both a fix to the crisis tendencies of over-accumulation under capitalism, and as a constraint on capitalist value generation by locking investments into the built environment (Harvey, 2001). However, as Bob Jessop (2006) pointed out, Harvey's 'trademark' notion of the spatial fix is loose and

¹⁰⁹ The territorial turn has been dated to the International Labour Organization's 1989 Convention on Indigenous and Tribal Peoples (ILO 169), which defined indigenous territory, fought for indigenous cultural integrity, and demanded the recognition of indigenous territorial rights (Anthias & Radcliffe, 2013; Escobar, 2008).

heterogeneous; it is a general term that Harvey used to refer to the variable spatial dynamics involved in addressing the crisis tendencies of capitalist accumulation. In *The New Imperialism*, for example, he deployed a refined notion of a spatio-temporal fix, re-named to invoke the long-term nature of capitalist fixes to the over-accumulation of capital and labour.¹¹⁰ This spatio-temporal fix, he argued, is central to the geographical expansion and spatial re-organization of capitalism, but it is the surplus of *capital* rather than labour that must be the primary focus of analysis (Harvey, 2003).

This concept may therefore only help to explain *some* of the conditions and processes at work in the Peruvian Andes, especially given that the capitalist mode of production does not entirely dominate social relations in the region (Mayer, 2002; Smith, 1991). Nonetheless, my use of the term does take some inspiration from Harvey, who pointed out that: a) capital surpluses need to be discarded and dispersed, before being re-absorbed within capitalist circuits of value creation; b) in doing so, capitalism necessarily seeks out new terrain – new spatial frontiers – upon which to resolve its crises of over-accumulation (Harvey, 2001, 2003). The second point was part of Harvey’s formulation of ‘accumulation by dispossession’ (a reinterpretation of Marx’s primitive accumulation), while the former related to the simultaneous surpluses of both capital and labour power that are generated by capitalist crises.

Both points strike a chord in the Peruvian Andes: the alpaca industry, for example, is constantly looking for new places to invest, for new sources of wool required to maintain the industry’s recent growth. To absorb surpluses of capital, the sector is even investing in non-profit alpaca genetic research centres, which – as I explain in the following chapter – require *long-term* capital expenditures *and* fixed spatial localities and infrastructures. Through these processes, the surplus populations and labour power of the Andes – the marginalized *campesinos* often left to exist outside or at the margins of capitalist society – are also being enrolled in relations of production that insert at least some of the products of their labour into capitalist markets. Capital, then, is seeking out new terrain, going further into the Andes in search of resources to expropriate (including culture as a resource). Harvey’s spatial fix is also at work more literally in places: as capital extends to these locations, so storage and trading

¹¹⁰ According to Harvey, over-accumulation – that is a surplus of labour and surpluses of capital – can be resolved through: a) long-term capital projects or social expenditures that defer capital re-entry; b) spatial displacements through new production capacities, for example; or c) some combination of (a) and (b) – hence, the spatio-temporal fix (Harvey, 2003, p. 109).

facilities are constructed, fixing the investments of large alpaca enterprises onto the landscape and into the communities in these remote locations.

As the alpaca sector becomes increasingly invested in these areas, there is a parallel requirement of ensuring that rural production can continue to meet the demands of the sector – in terms of both quantity and quality (while I address the latter in chapter seven, the collective fix focuses more on quantity). One way of ensuring that production quantities are maintained and that productive outputs reach the necessary markets is to encourage the strategy of collective commercialization amongst *alpaqueros*. At a minimum, collective commercialization entails the pooling of alpaca wool amongst a collective of producers, enabling them to accrue larger quantities and to deal more efficiently, predictably, productively, and profitably with representatives from the alpaca industry. However, collective commercialization can also extend to cooperative ownership of land, alpaca herds, and infrastructure (such as the sorting and trading facilities that work to spatially fix capital investments in infrastructure).

The effect of collective commercialization is, however, somewhat paradoxical: rather than lending the *alpaqueros* more control over the means of production, collective organization further ‘frees’ them from such control (Harvey, 2001), as they become a kind of de-facto wage labour force working for remuneration via the cooperative or association. As individuals, these *alpaqueros* are deemed unproductive and unviable according to capitalist logics of production efficiency; they are deemed largely surplus to labour requirements. For the alpaca industry, remote individual *alpaqueros* are often an unreliable source of production. As a collective, however, these *alpaqueros* produce greater accessible quantities of wool and they do so on a more regular or consistent basis. Interviews with association members revealed that collective commercialization stimulates an increasing proportion of each *alpaquero*’s wool to be directed to the market, as contributions to the association are determined by rules of membership. From this situation, Harvey might conclude that the producer is no longer producing for him or herself (see Harvey, 2001, p. 298). The ‘fix’, in this sense, works to resolve the issue of surplus labour, as *alpaqueros* are transformed from subsistence and reciprocal producers to capitalist market producers, largely working for a cooperative that often has ties with a particular intermediary or buyer from industry; the *alpaqueros* increasingly play the part of something more akin to a wage labour force, or proletariat.

There is also a temporal component to this establishment of collective proletariat, thus invoking Harvey's later use of the term spatio-temporal fix, and pointing to what Peck & Tickell (1994) referred to as an "institutional fix". This institutional fix, they argued, was a new social compromise to reign in the effects of neoliberalism and deregulated competition by establishing a new set of regulatory rules and a new mode of social regulation capable of restoring sustainable (i.e. long run) economic growth. The search for an institutional fix was therefore one of re-establishing *social* rules of the game – new forms of social regulation – that help to overcome social polarization and the collapse of social frameworks for productive labour (Peck & Tickell, 1994).

Later, Peck, Theodore, and Brenner developed the notion further to explore the creation of non-market forms of coordination and governance. "Neoliberal forms of institutional creation" they argued, "are no longer oriented, in a pure sense, towards the promotion of market-driven capitalist growth. Increasingly, they include efforts to establish various sorts of 'flanking mechanisms'...[such as] the deployment of community-based programs and shadow-state initiatives to combat social exclusion" (Peck, Theodore, & Brenner, 2009, p. 64). Karl Polanyi would no doubt have supported Peck et al.'s analysis, since forms of economic integration – in this case free market trade and exchange – require an institutional basis; without a social framework for the production of goods and for the establishment of the rules of a market system, exchange is ineffective as a means of integration. In this sense, the collective fix that I explore below can be seen as a kind of institutionalized coordination and governance designed to support continued accumulation by simultaneously protecting the social framework for productive labour and ensuring that the outputs of such labour are inserted into capitalist circuits of value.

While the above might reflect a Marxist-inspired economic geography of agrarian change in the Southern Andes, I also open up the notion of the collective fix to broader processes of governing Andean populations. Sarah Radcliffe and her colleagues have taken similar steps in this regard. Radcliffe & Laurie used the term "socio-spatial fix" to describe the ways in which imaginative geographies of development policy "fix indigenous development to limited scales, spaces, and social groups, reflecting a spatially fixed vision of culture as localized, ethnically homogenous, and grounded on gendered divisions of labour" (Radcliffe & Laurie, 2006b, p. 84). As I explain below, the collective fix works in a similar fashion, as collective organization is constructed as a normalized component of Andean indigenous life.

More recently, Anthias & Radcliffe approached the issue of collective land titling in the Andes with the “ethno-environmental fix” as a conceptual tool for drawing attention to the synergism of governance approaches that seek to protect both vulnerable populations and highly-valued natures from the destructive effects of the market (Anthias & Radcliffe, 2013). Their approach built on existing scholarship on ecological and environmental fixes, and in particular on Noel Castree’s (2008a, 2008b) broad conceptualization, which shifted emphasis beyond market expansion to consider broader “objectives that relate not only to the need to overcome barriers to processes of capital accumulation, but also to the need to govern society and nature *in their wake*” (Anthias & Radcliffe, 2013, pp. 2, emphasis original).¹¹¹ In building an encompassing notion, therefore, Anthias & Radcliffe drew on Tania Li’s approach to the ways in which relations between land and people have been governed by colonial administrators, states, and development planners. The granting of TCOs (Community Lands of Origin) in Bolivia, for example, acts as an ethno-environmental fix as it enables indigenous peoples to “satisfy their own development needs while realizing their potential as ‘guardians of biodiversity’” (Anthias & Radcliffe, 2013, p. 12). The TCO limits the destructive effects of marketization both on these populations and on fragile biodiverse environments. As a corollary to this process, however, indigenous populations that diverge from the imaginary of their role as “guardians of nature” are excluded from territorial claims, pointing to the performative nature of contested indigeneity (see also: Muehlmann, 2009, 2013).¹¹²

In Anthias & Radcliffe’s emphasis on protecting indigenous populations, we see Tania Li’s influence, and yet we can take further her notion of the “communal fix”. Li (2010) argued that the formal recognition of indigenous collective governance mechanisms has been a long-lasting strategy of colonialism, as it separates individual land owners capable of functioning as competent market subjects, from groups of people deemed in need of protection from

¹¹¹ In contrast to Castree’s various kinds of environmental fixes, Bakker’s (2009, 2010a) conception of an ecological fix focused more explicitly on the limits to the capitalist process of externalizing and internalizing socio-environmental conditions to resolve crises of over-accumulation. For example, surpluses are externalized in the form of pollutants, waste, etc., before being internalized through new investments, such as in waste treatment plants, waste-to-energy facilities, contracted waste management services, etc. More recently, Cohen and Bakker (2014) have added a scalar element, offering the ‘eco-scalar fix’ for understanding the deployment of scales within environmental governance.

¹¹² Compare this approach to Brett Christophers’ (2014, p. 754) use of “territorial fix” to indicate how territory is deployed as “a technology of market-making geared to putting in place and optimizing the conditions for capital accumulation”.

dispossession and resource degradation. The term therefore illustrates how contemporary agrarian policies are designed “to protect selected groups of rural people from the risk of dispossession while offering them the benefits of market involvement” (2010, p. 386). The World Bank, for example, began dividing populations according to a diversity of tenure regimes tailored to the cultural particularities and capacities of these selected groups. These neoliberal global institutions, Li argued, are pursuing an ideal communal tenure system that combines the safety-net function of formally recognized collective rights (e.g. the TCOs discussed by Anthias & Radcliffe) with measures that encourage efficiency and promote a voluntary act of opting for individual title.

Paternalistic experts in the development sector therefore impose these model systems of collective tenure from the outside, thereby deciding who should be protected from the risks and opportunities of market engagement and what such protection should entail. However, Li also pointed out that local groups sometimes impose collective landholding on their own members, as they seek to enrol small-scale producers into inalienable but efficient models of landholding; there is a degree of ‘fixing’ tenure patterns in order to facilitate accumulation. In Marxist vernacular, indigenous populations are externalized as landless individuals, and internalized as groups with communal land tenure for the purpose of ensuring both their participation in capitalist processes of accumulation *and* their protection from the harshest effects of such participation (in order to ensure their continued participation).

In what follows, I adapt Li’s term to account for a similar process, but one that is not dependent on the granting of bounded communal territories and rather revolves around the creation of routinized (that is to say somewhat fixed) collective relations. This could be read – in line with Peck & Tickell’s ‘institutional fix’ – as a new form of social regulation, but as I explain below the collective fix also stems from a history that lies outside of neoliberal capitalist modes of regulation. I explore how collective associations of production and reproduction are designed and established (often by external experts making assumptions about local and indigenous custom) in order to protect Andean communities and households, while at the same time affording and guaranteeing greater participation in economic markets and processes of accumulation. I use the term collective fix not to invoke the fix of a collective right to land – that is, fixed terrain – but to suggest that collective organization and association in the Andes is a ‘fix’ for two overlapping reasons: it absorbs the surplus populations (and their contributions to value production) by ensuring that these individuals – otherwise

externalized from market action due to centuries of exclusion – operate together as a coherent economic actor; collectiveness is also designed to protect the group from the harshest (but by no means all) of the effects of participation in the market; it reflects a ‘fixed’ notion of collectiveness in the Andes, based on recent institutional histories in the aftermath of Agrarian Reform and on cultural assumptions about Andean social organization. This final point reflects the fact that, in the Southern Andes, collective organization is seen as a normalized (and sometimes romanticized) way of responding to market pressures, simultaneously creating a degree of ambivalence on the part of those who organize collectively, and a related lack of critical reflection on why they do so and whether its effects live up to expectations (if any exist).

The collective fix at work I: promoting cooperative organization

While Tania Li’s focus was largely on the recognition and titling of communal land rights, in this section I focus on the establishment of collective forms of organization and association. I use the term ‘collective fix’ to refer to the promotion of collective solutions to livelihood problems, land tenure arrangements, and the simultaneous problematic of market inaccessibility *and* vulnerability. Collective measures are advocated – both by local actors such as influential *kamayoq*, and by extra-local paternalistic parties such as NGOs and some government programmes – in order to include certain populations in accumulation processes while simultaneously protecting them from some of the risks associated with individual participation. Rather than focusing on the formal granting of communal land rights, the collective fix focuses attention on the creation of a collective market actor, where individuals are deemed incapable of fully or effectively participating in the market on their own (and would otherwise be externalized). The collective fix therefore conceptualizes two linked components: 1) enhancing the ability of social groups to function in the market (such as through collective commercialization) as a proxy for a rational individual economic actor, or *homo economicus*; 2) enhancing the ability of both the collective body and outside paternalistic influences to protect livelihoods and the resources of the group from dispossession, thereby ensuring their *continued* participation in processes of accumulation.

I unwrap the collective fix through two forms of collective organization: associated production (associations of alpaca herders); and associated reproduction (associations of

kamayoq as knowledge producers and re-distributors). Both examples operate through Soluciones Prácticas programmes such as Proyecto Paqocha (2010-2014). Part of the project's aims were to produce a network of collective market actors by linking local alpaca producer associations to their regional and macro-regional counterparts, as well as to an overlying association of *kamayoq* that is designed to act as a technical team by advising the producers associations on how to improve collective and/or cooperative organization, production, and commercialization. As part of Proyecto Paqocha, consultants delivered capacity-building sessions that focused on techniques of collective commercialization, enhancing access to markets, and improving product processing and marketing. The perceived success of this approach has led to the *kamayoq* system being praised as an example of collective entrepreneurial action in establishing a private system of service delivery (Hellin, 2013). An excerpt from a Practical Action research brief captures the market-oriented nature of the project's paternalistic aspirations for collectiveness (despite locating the project within the themes of food security and reducing climate vulnerability):

The farmers lack knowledge of how to organize themselves, in order to influence others involved in the market chain for their products, and how to improve their access to markets.

The project is:

- Working with 25 local producer associations to strengthen the productive and organizational capacities of their 600 members. Practical Action has developed technical manuals...on camelid management such as shearing, breeding, and shelter, which will be available to the farmers.
- Market mapping the camelid market chain, together with the farmers and other stakeholders, which will help all those involved in the camelid market chain to understand better the journey a product takes, from producer to retailer, and to identify the blockages, challenges (such as unfair policies or taxes), and opportunities, to enable the farmers to maximize their incomes (Practical Action, 2010, p. 4).

This context of training *alpaqueros* to overcome hurdles to market participation is evocative of the situation observed by Walker et al. (2008) in Mexico, whereby project participants were expected to become “entrepreneurs of themselves” by seeking opportunities to learn business and entrepreneurial skills. Yet the *alpaqueros* were not encouraged to become individual entrepreneurs; rather, in forming local producers associations and linking them regionally, the aim was to establish a collective economic actor capable of competing in the increasingly competitive market place for alpaca-related goods. Producers of alpaca wool and wool-related products in Apurímac have been unable to compete with producers and artisans in Puno, Cusco, and Arequipa. This is not just due to the poorer quality of wool and

wool processing (both of which I discuss in chapter seven), but stems from an entrenched bifurcation of the alpaca sector between three large, dominant producers based in Arequipa, and some 170,000 peasant pastoral households that are spread throughout the Andes above 4,000 masl (Postigo, Young, & Crews, 2008). These three conglomerates in Arequipa possess a large degree of purchasing power, but there is also an influential network of small and medium traders who operate in market towns across the Sierra Sur, purchasing alpaca wool and directing it to artisanal production or to the large conglomerates in Arequipa.

The simplified supply chain of alpaca wool begins with pastoral production in rural communities, before their wool is collected by *alcanzadores* (literally ‘reachers’) – who go to communities and small market towns either to purchase the wool directly from the producers, or to acquire it through exchange mechanisms such as *trueque* (barter). These *alcanzadores* trade the wool to *rescatistas* (literally ‘rescuers’) – collectors who can sometimes be the same individual as the *alcanzador*, but their task is accumulation; they accumulate wool on a regional basis from the *alcanzadores*. These *rescatistas* – who vary in their capacities – then sell wool in large quantities to alpaca enterprises, but they do so via representatives or agents of the enterprises, who are often organized according to their own hierarchy and extend out from the hub in Arequipa, dotting the Sierra Sur in search of lucrative deals with *rescatistas*. While the reality of the production network is rather more complex (see **Figure 23**), at every point in the network a significant mark-up is added to the price of the wool – the largest of all, of course, contributing to the final value of an alpaca wool garment in a high end clothing store, such as in Cusco. A finished garment made from baby alpaca wool (the second most valuable category of wool – see chapter seven) and weighing just hundreds of grams can sell for hundreds of US dollars, while the price paid by the large enterprises for baby alpaca wool is approximately US \$22 per kilogram; the *alpaquero* who supplied the wool receives just a fraction of this revenue.¹¹³

¹¹³ In this chapter I use the terms “supply chain” and “production network” simply to distinguish between the abstract model of the former and the more detailed depiction of the latter. However, I have not positioned this chapter within scholarly debates on commodity chains or production networks, as the focus is on the effects of collective organization and the socialization of the initial phase in the supply chain. Placing this socialization into a broader production network or commodity chain analysis would, however, be a productive avenue for future research, as it could explore the effects of local cases of collective organization on the broader production dynamic.

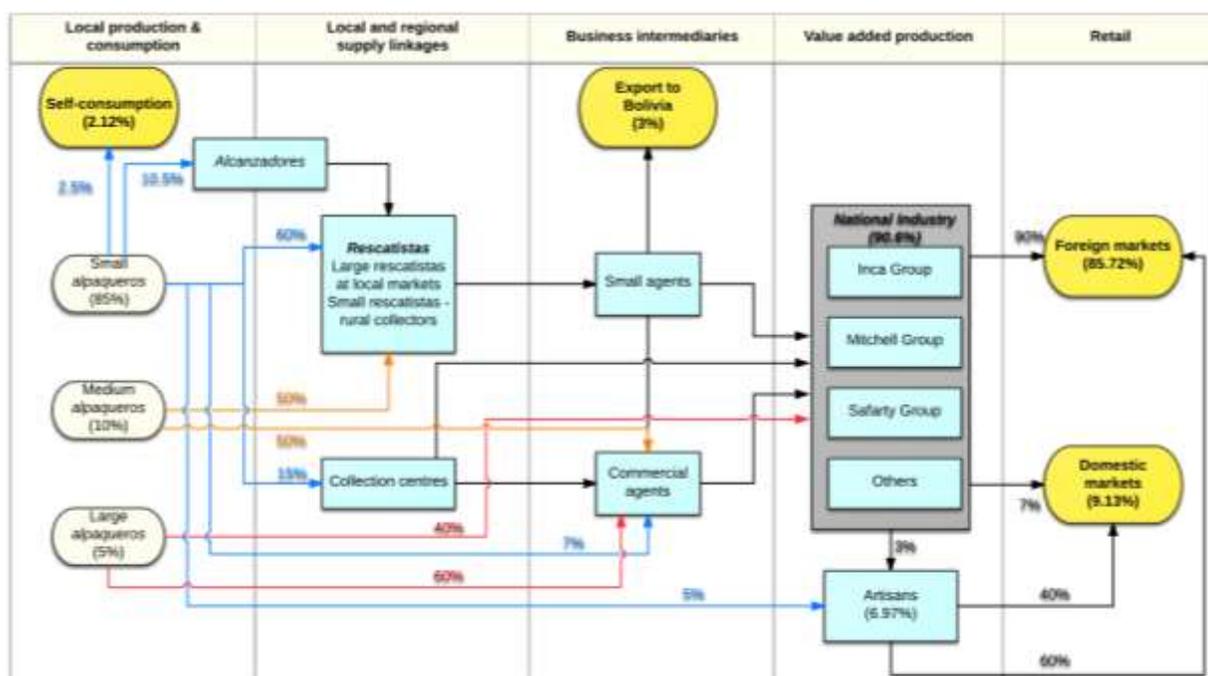


Figure 23 Alpaca production network (derived from interviews and adapted from a presentation by Daniel Aréstegui – see appendix 1)

Collective commercialization is therefore intended to remedy the unevenness of the alpaca wool production network. As Figure 24 of the alpaca wool supply chain illustrates, the combined process of cooperative collection amongst *alpaqueros* and collective commercialization of the accumulated wool theoretically transforms these small-scale individual actors into one larger, more economically powerful actor capable of bypassing the *alcanzadores* and *rescatistas* to deal directly with representatives of the alpaca industry, or perhaps even directly with the alpaca enterprises. Given that at least seventy per cent of alpaca wool produced by small-scale *alpaqueros* is channelled through *alcanzadores* and *rescatistas*, combined cooperative collection and collective commercialization offers the potential to substantially increase the revenues directly accumulated by *alpaqueros*. Moreover, with the training provided by Soluciones Prácticas, and with introduction of small scale technologies such as the spinning wheel demonstrated to me by Alejandro (see chapter two), collectively organized *alpaqueros* should be able to sell correctly separated and processed wool directly to the alpaca industry, including the large enterprises in Arequipa and smaller scale artisans and local manufacturers. In Layo, the *kamayoq* also instigated the creation of a local artisanal cooperative, training local *alpaqueros* in artisanal production (e.g. of hats, scarfs, sweaters, blankets, etc.) and collectively organizing their output so as to sell directly to domestic

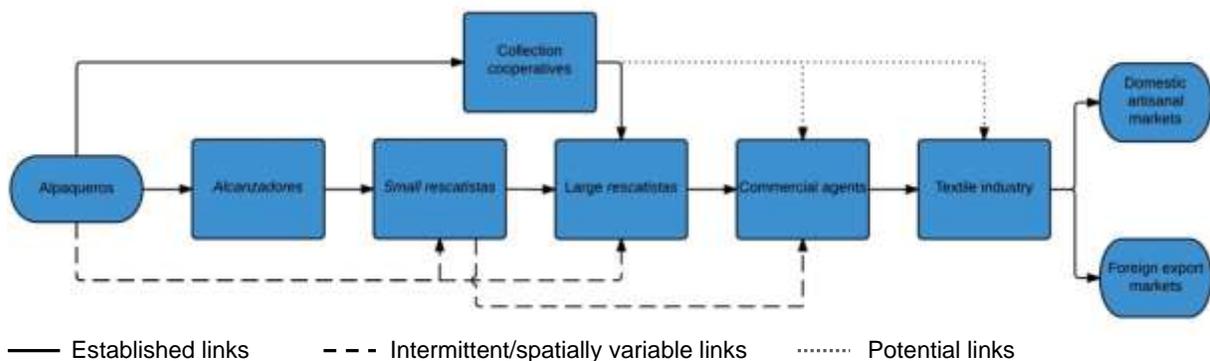


Figure 24 Alpaca wool supply chain, illustrating the theoretical benefit of cooperative collection

markets (such as tourist retail outlets in Cusco). All of these forms of organizing collectively have the additional benefit of creating opportunities of enhanced service provision, such as through civil society groups, local financial and micro-credit institutions, veterinary services, and government institutes and agencies such as AgroRural and SENASA.

Overall, there are two related, yet apparently contradictory processes at work. One is the market-oriented nature of placing emphasis on creating more efficient mechanisms for wool collection and accumulation, and establishing more direct routes to markets. In bypassing *alcanzadores* and *rescatistas*, alpaca wool is directed more efficiently to large and small-scale manufacturers: there is less ‘wastage’ along the supply chain (such as through domestic use by *alcanzadores*), as well reduced interference with price mechanisms (*alcanzadores* are reputedly often unaware of prevailing market prices for alpaca wool). Moreover, as **Figure 23** of the alpaca production network illustrates, value-added production within the typical production network usually occurs towards the end of the supply chain, once supplies of wool reach the alpaca industry. The promotion of cooperative collection, processing and artisanal production, followed by collective commercialization, adds value earlier in the supply chain, thus contributing to the developmental goals of the Peruvian state and its agencies such as Sierra Exportadora.

The socialization of the initial stage of the supply chain therefore provides opportunities for collective control over the process of value creation. In displacing intermediaries, the *alpaquero* collective is able to acquire a larger proportion of the value chain, but estimates vary regarding the significance of this increased share. Daniel Arestegui – who led a Soluciones Prácticas workshop on understanding market dynamics and value creation – was confident that collective organization could secure a large proportion of the market. Eighty-

five per cent of wool produced in Peru originates from small producers; from that wool, approximately seventy per cent is directed through *rescatistas* (sixty per cent directly and ten per cent via *alcanzadores*), compared to only fifteen per cent through cooperatively run collection centres. With the *rescatistas* also acquiring wool from medium-sized alpaca producers (who produce ten per cent of wool in Peru), the *rescatistas* end up with approximately sixty-five per cent of wool in the initial collection stage, compared to just thirteen per cent accrued in collection centres.

Collective organization and cooperative ownership of collection centres therefore offers the potential of substantially reducing the proportion of wool controlled by *rescatistas* in the early stages, allowing *alpaqueros* to determine better the direction of accumulated wool. By contrast, Alonso Burgos – director of the Inca Tops supported alpaca research ranch Pacamarca SA – made the point that this socialization of the early stages of the value chain may still prove small change in the larger scheme of wool production in the Andes, given that there exists some 170,000 small producers dispersed the region. Given their disparate locations, only a handful of neighbouring *alpaqueros* can organize together, meaning that each collection cooperative will still only control a small proportion of the overall wool directed towards the large textile industry leaders in Arequipa. Ultimately questions therefore remain as to whether collective organization and cooperative collection can substantially affect the existing production network.

Nonetheless, for promoters such as Soluciones Prácticas and Sierra Exportadora, collective organization creates a more efficient and more productive supply network, while also serving to protect the *alpaqueros* as a collective economic actor. As individuals, they are vulnerable to market fluctuations and potential exploitative relations with *alcanzadores* and *rescatistas*; collective organization enhances their market power, liberating them from any previously dependent relationships with these intermediaries while also providing a social safety net (the cooperatives redistribute revenues to cover productive deficits among participant farmers). Collective commercialization therefore extracts resources that might otherwise be used for subsistence and inserts them into the market, while additional protection from the negative effects of market participation is provided by new institutional links to service providers (which paradoxically become available once market participation is pursued). While organizations such as Soluciones Prácticas seek to protect groups of *alpaqueros* according to paternalistic patterns of international development, collectively

organizing *alpaqueros* also serves to protect this newly emerging proletariat – formed in part by capacity-building, training, and professionalization programmes (such as the IPEBA model discussed in chapter five) – so that it can perform its role in capital accumulation.

These insights point towards a Marxist-inspired reading of the potential for collective agrarian development. While Marx was not entirely inimical to the market (so long as the means of production remain under the control of the labour force), he was ultimately pessimistic about the opportunities afforded by cooperatives. Cooperation among workers within the capitalist mode of production – he argued – has a dual function, as it both facilitates the (unequal) accumulation and circulation of capital and creates the social conditions necessary for resisting such inequality: “as the number of the co-operating workers increases, so too does their resistance to the domination of capital, and necessarily the pressure put on [them] by capital to overcome this resistance” (1976, p. 449). Indeed, it is capital in the first instance that creates this condition of cooperation among labourers: “the co-operation of wage-labourers is entirely brought about by the capital that employs them. Their unification into one single productive body, and the establishment of a connection between their individual functions, lies outside their competence” (Marx, 1867, p. 449). Capital, then, *produces* worker cooperation as a way of controlling labourers:

the socially productive power of [co-operative] labour develops as a free gift to capital whenever the workers are placed under certain conditions, and it is capital which places them under these conditions. Because this power costs capital nothing, while on the other hand it is not developed by the worker until his labour itself belongs to capital, it appears as a power which capital possesses by its nature – a productive power inherent in capital (Marx, 1867, p. 451).

If cooperative labour – as a Polanyian form of ‘communal solidarity’ – operates alongside institutionalized forms of market exchange in the Andes, the question emerges as to what kinds of labour conditions may be capable of producing an equitable form of capital accumulation and circulation. For Marx, rather than cooperative production and collective commercialization, for example, the answer lay in the utopian vision of associations, a notion that – according Harvey (2010) – Marx borrowed from French socialist utopian thought. “Let us finally imagine”, Marx (1867, p. 171) implored, “an association of free men [*sic*], working with the means of production held in common, and expending their many different forms of labour-power in full self-awareness as one single social labour force...the total product of our imagined association is a social product”. Taken from Marx’s lively exposition of commodity

fetishism, these comments reflect his hope that we might advance beyond a fetishism of commodities to establish, through associative forms, a different way of regulating our interchange with nature (including other labourers).

Like the forms of collective organization of labour that I discussed above, Marx was referring to the transformation of many individuals into one actor, “one single social labour force”. The difference for Marx was that under cooperative control the tendency prevails for resources and capital to be centralized in the hands of the few. In this context, *alpaqueros* remain locked into dependent market relations with the dominant players of the alpaca sector, which will promote a race to the bottom amongst alpaca wool producers and suppliers. By contrast, under associated production the *alpaqueros* would hold their means of production in common, allowing them to associate freely without social constraint; *alpaqueros* should be able to produce and reproduce their own conditions of existence and fulfill their own needs. In the following section, I explore this distinction by turning to associations of production (*alpaqueros*) and reproduction (*kamayoyq*), exploring the barriers encountered in their establishment and their function.

The collective fix at work II: associated production and re-production

As part of Proyecto Paqocha, Soluciones Prácticas supported the formation and horizontal networking of local *alpaquero* associations. It was envisaged that these local associations would be connected vertically to their regional and macro-regional counterparts, as well as to an overlying association of *kamayoyq* designed to act as a technical team by advising the producers associations on the aforementioned issues of collective organization and cooperative production and commercialization. Producers’ associations – the organization argued – can demand a higher price for their alpaca-related products, and can organise together to purchase shared inputs, such as technologies and veterinary products. A baseline study, however, revealed that just fifteen per cent of *alpaquero* families surveyed in the project region purchased their inputs through local associations (n=142), just forty-five per cent had any kind of experience with associated retail of their products, and just six per cent had joined with other *alpaqueros* to sell wool collectively – let alone established a long term commitment to associated production (Soluciones Prácticas, 2011). To address this issue, Proyecto Paqocha established the ambitious target that half of the participating *alpaquero* families (400 of a total

800) will have completed at least two operations of joint purchases of inputs and/or sales of alpaca products (fibre, meat, or leather) in local and regional markets. On the surface, the project approach to *alpaquero* associations appears as instrumental as the market-oriented form of cooperative organization and collective commercialization outlined above. However, the process of organizing *alpaqueros* into associations has a series of its own contextual limits and effects.

Table 10 lists some of the associations that are being incorporated within Proyecto Paqocha, along with their productive and associative characteristics. The table includes just six of the twenty-eight associations identified in the Apurímac implementation area of Proyecto Paqocha area. The others are either dormant shells, or have allowed their legal status to lapse, and are therefore ineligible for funding by programmes such as ProCompite or AgroIdeas.¹¹⁴ While eligibility for government funding programmes should not necessarily be a measure of an association's status, it is significant that the majority of associations exist in name only. For those included in **Table 10**, the majority have developed only very basic forms of cooperation amongst the members, such as grazing individually owned herds on common pastures – a common practice independent of associations and shaped by the recent history of how cooperative communities emerge from the Agrarian Reform (Mayer, 2009). Few associations in Aymaraes or Antabamba appear to produce collectively, in the sense of collectively owning all means of production, though some have developed common infrastructure such as barns, chicken houses, and – importantly – wool collection and distribution centres.

The establishment of collection and retail centres should enhance the ability of these associations to compete in the market place according to the process of collective commercialization explained above, as bulk resource accumulation should allow them to bypass local intermediaries. Some associations even function as intermediaries, purchasing

¹¹⁴ ProCompite is a national programme established by Federal decree that allows regional and local governments to implement Competitive Funds for the Co-financing of Productive Proposals (Business Plans), which are submitted by small producers in partnership (e.g. associations, cooperatives, etc.). AgroIdeas – the Compensation Programme for Competitiveness (Programa de Compensaciones para la Competitividad) – is a Ministry of Agriculture initiative designed to support associations and entrepreneurs in the agricultural sector through non-refundable co-financing options, conditional on the establishment of a legally registered organization that is managed transparently for the purpose of technologically enhancing production.

Table 10 Activities and attributes of six active associations in Apurímac

Province	District	Association	Description	Productive activities	Financial aspects	Market relations	
Aymaraes	Cotaruse	Ichumarca	Four years old with 40 members; updating registration; meets twice a month.	Manages 20 hectares of natural, irrigated grass pastures; poultry breeding; owns a wool a collection center.	Contributions collected annually; gains from membership equate to approximately 100 soles (US \$35) per alpaca.	Sells wool to intermediaries in Quilcaccasa	
		Apu Tawaorcco	Four years old; 26 members (14 men, 12 women); meets monthly; updating registration.	Dormant; reorganizing to resume productive activities.	Contributions collected annually; revenues derived from annual sales of alpaca wool.	Sells wool to local intermediaries.	
		Tambo Inca	13 members (7 men, 6 women), 11 active participants; registration being updated.	Production activities carried out by individual households on common pasture for grazing.	Average revenues of 7-8,000 soles (US \$2,400-2,750) annually.	Sells wool to an enterprise in Lima (Copecan); sell jerky in local markets.	
Antabamba	Juan Espinoza Medrano	Apu Andes Condon	Two years old; 27 members (20 men, 7 women); in the process of acquiring legal status with a developed a work plan; meets monthly.	Production activities according to a work plan that establishes responsibilities of partners. Natural pastures, cultivated land, and a space for wool collection and sale.	Average annual revenues of US 100-150 soles (US \$35-52) per family.	Sells products to partners and intermediaries in Espinar (Cusco).	
		Sabaino	Sumac suri	With two years of operation, 22 active members (6 women, 14 men), features work plan, monthly meetings.	Production at the family level on natural pastures; wool collection from members and distribution to market partners.	No registration driven revenue, income is derived from the overall annual average revenue.	Sells products to partners and intermediaries in Sicuani (Cusco).
			Munay paqocha	Five years old, 24 members (8 women, 16 men), 15 active; upgrading management tools & legal registration.	Family level production on communal grazing land.	No registration driven revenue, income is derived from the overall annual average.	Collective commercialization through Cooperativa Huancullo de Totorá.

wool from other local associations; the wool from association Munay Paqocha in Sabaino (Antabamba), for example, is purchased by the cooperative Huancullo de Totorá in the small town of Quilcaccasa (in Aymaraes). In general, market links for associations in Antabamba are strongest with local intermediaries in the province, and they have developed some sporadic links with intermediaries in Sicuani and Espinar in Cusco. These links suggest that the associations are unable to achieve the assumed ability to bypass these intermediaries, but they also have a strong relationship with the wool-purchasing Cooperativa Huancullo Totorá in Aymaraes.

Nonetheless, these associations in Aymaraes also appear to struggle with the constraints of local intermediaries, with links mostly developed with purchasers in Cotaruse and Quilcaccasa; one association has developed links with a Lima-based enterprise known as Copecan. Some association members identified that the inability to escape the dependent relationship with intermediaries is a reflection of the weak institutional environment in the area, with Soluciones Prácticas, local governments, and AgroBanco the only visible and accessible options.¹¹⁵ Initiatives of support, such as the national government programmes of ProCompite and AgroIdeas, therefore struggle to penetrate local contexts, which remain characterized by unequal market relations and the uneven provision of private services – both of which became entrenched in the wake of the *Fujimorismo* of the 1990s. The limited financial gains derived from association membership (see **Table 10**) therefore represent little compensation or incentive for *alpaqueros* to associate in Apurímac, thus adding another layer to the uneven topographies of development in the Sierra Sur (see chapter four); compare, for example, these struggles in Apurímac with the institutionally stable and well-connected *alpaquero* associations of Cusco (see: Ho Chau, 2010).

In addition to the above institutional and organizational challenges, the case of producers associations in the Apurímac also raises a slightly different debate around what Raul Ho characterized as being “in between autarky and dependency” (interview, December 2012). According to Ho, the formation of producer’s associations is common-place in the Andes, and usually revolves around a social agreement of mutual exchange and reciprocity: those with

¹¹⁵ Agrobanco is a domestic financial institution – established by Federal decree – dedicated to lending in the agricultural sector.

more or better quality land, for example, exchange access to this land for other productive benefits, such as breeding studs (a resource-based form of *ayni*). These relations have the potential to build the kind of autarky (or self-sufficiency) alluded to by Ho, as well as facilitate collective autonomy in decision-making. These associations, however, are also exclusionary, described by Ho as “private” in the sense that they are formed by a minority group of producers who are aligned with similar visions and capacities of market participation. As such, they “ignore the poorest population of the community, and so there is the problem of inequality: if all project resources are for so-called ‘wealthy farmers’ to connect with the market, you drop a significant number of poor producers and begin to have the evils that are characteristic of inequity” (interview, December 2012). This situation is similar to what Marx predicted would happen with workers cooperatives, and reflects the fact that the majority of NGOs promoting associated production in the Southern Andes today do not do so in order to displace capitalist relations of production but to reproduce them.

Two further implications to Raul Ho’s observations are therefore worth noting. First, although Article 80 of the Peruvian Civil Code stipulates that legally recognized associations must pursue a non-profit purpose through a common activity, this “common activity” is neither defined nor linked to broader social interests or public benefit. With no obligation to the broader community, producer’s associations are left to act as liberated – albeit collective – market agents, so long as profits are internally re-distributed. In this context, the notion of a collective fix captures how these groups protect themselves from the market through association while simultaneously enhancing the appropriation of resources in order to aid accumulative processes. In the process, the land and resources of the excluded poorer farmers are left vulnerable to appropriation at the hands of the wealthier groups. Second, as organizations like Soluciones Prácticas work to construct an institutional framework that is supportive of associated production, so the inequality gap may widen. Existing associations become dependent on the institutional support of the networked institutional influence of CIAR (which evolved from *Escuela de Kamayoq*). Meanwhile, the farmers excluded from associated production have begun to ask why it is that groups of wealthier farmers continue to receive the benefits of agricultural services – including those of the *kamayoq*, and particularly when producers associations and *kamayoq* associations are pro-actively linked.

These programmatic traits exacerbate the forms of conflict introduced in chapters four and five. The strategy adopted so far within Proyecto Paqocha has been to focus on further building the capacity of *alpaquero* associations already showing signs of success, while either abandoning weaker associations or encouraging their members to merge with other nearby successful or larger associations. According to a Soluciones Prácticas-commissioned audit, these weaker associations struggle from institutional constraints such as: low levels of participation and leadership among women; the disparate and inaccessible nature of the participating producers; limited administrative and entrepreneurial capacities, including production management and marketing capabilities; poor leadership; low levels of participation in decision-making scenarios; differentiation in the rate and degree to which members are improving production; and ecological constraints, such as reduced availability of water and climate change (Silva Wharton, 2013). In this context, the collective fix does not appear to offer an actual “fix” to the already-stressed livelihoods of alpaca producers, instead potentially placing a heavier burden on their everyday responsibilities.

Turning attention to *kamayoq* associations in Cusco reveals further limitations to the collective fix (despite the fact that the emphasis placed on *alpaquero* associations in Apurímac was stimulated in part from the success of similar institutions that Soluciones Prácticas had witnessed in Cusco). Perhaps the most influential – and arguably most successful – local *kamayoq* association was established with the assistance of Project MASAL under the name of Toribio Quispe Jallo, who has been credited with reviving the *campesino-a-campesino* methodology in Cusco (see chapter four). The aims of Association Toribio Quispe Jallo are to build the capacity of the *kamayoq* in managing and implementing action plans, and in formulating community development proposals. Its functions include channelling the problems and proposals of members to appropriate institutions, maintaining unity among *kamayoq*, promoting the cultural and professional identity of the *kamayoq*, opening up opportunities for *kamayoq* to compete for contracts in service provision, and building knowledge of market opportunities and capabilities to establish and run small businesses (Coupe, 2009). There is a clear emphasis on cultivating competent and active market actors, while simultaneously protecting the *kamayoq* as a cultural group. Yet *kamayoq* have begun withdrawing from the association, citing problems of unequal power and representation in the association (descending from family-based strongholds over its activities), high costs of

registration relative to personal gains, and the association's static position vis-à-vis other institutions that could provide additional support. Other local *kamayoq* associations struggle from similar internal conflicts; the activities of the Kunturkanki Association, for example, were suspended due a deadlock among competing powerful members.

These conflicts present a problem for the macro-regional, second tier union of associations known as AMARKAS (Asociación Macro-Regional de los Kamayoq del Sur), which consists of a dozen local *kamayoq* associations from the departments of Cusco, Puno, Arequipa, and Apurímac. AMARKAS acts a unifying body in developing a macro-regional approach to the *kamayoq* methodology, with local *kamayoq* associations meeting on an annual basis to develop its strategic vision, often drawing on the technical assistance of NGOs such as Soluciones Prácticas and programmes such as Project MASAL. AMARKAS is also linked to other regional initiatives such as the Community Education Network (La Red de Comunicación Comunitaria) and its local partners, as well as to various sectors of regional governments. Until recently, it was the only other organization in the Sierra Sur – in addition to Soluciones Prácticas – accredited to perform certification on behalf of IPEBA; however, conflicts of interest meant that IPEBA refused to renew AMARKAS' accredited status, instead approving two other organizations (see chapter five).

Although IPEBA staff simply pointed to a failure of AMARKAS to report on its duties, AMARKAS President Felicitas Pucho Mamani revealed the more complex difficulties facing the macro-association. On one hand, she feels that IPEBA has favoured Soluciones Prácticas due to its institutional connections and experience in training a particular breed of *kamayoq*. Yet such a strong presence by Soluciones Prácticas is creating a split amongst *kamayoq*; while AMARKAS favours a unified approach to training and certifying *kamayoq*, Soluciones Prácticas has continued to scale-up its certification programme in its key programmatic locations. This exacerbates the uneven topography of development interventions and undermines attempts by AMARKAS to unify *kamayoq* within one institutional framework. In addition to these inter-institutional tensions, AMARKAS has experienced some recent intra-institutional conflict, oriented around the desires of one influential board member to dictate the association's strategic direction (and who began to destabilize progress by refusing to sign formal paperwork). According to Felicitas, this has resulted in AMARKAS splitting into two umbrella associations. Felicitas' division subtly changed its name to AMARKA Peru (known

as *llapanchis llankasun* in Quechua), in order to reflect their broader ambitions of expanding influence beyond the Sierra Sur. While there have been challenges to formally establishing this new institutional form, the necessary legal paperwork has been processed, ensuring that it will take on the legacy of the previous AMARKAS (the new AMARKAS will effectively be a new association, which Felicitas believes will fail due a lack of support for the defecting *kamayoq* attempting to lead it). Nonetheless, the difficulties with IPEBA appear to have forced the hand of Felicitas and her association, as they have sought institutional agreements with other certifying bodies, accepting the fate of no longer being accredited by IPEBA.

The situation of Felicitas and AMARKAS therefore reflects some of the contradictions entailed in the collective fix at work. While collective organization and association is promoted by development NGOs, such organization is not designed to radically alter existing institutional patterns but rather reinforce established norms while protecting members from some of the harshest effects of market participation. The collective fix therefore captures some of the ways in which forms of communal solidarity do not simply exist alongside forms of market integration, but are in fact designed to facilitate the deepening of market exchange as a prevailing form of integration while building on locally contextual institutional patterns. The above analysis has pointed to some of this local context in the sense of livelihood decision-making practices. To complete a Polanyian analysis of the context of instituted processes, I end this chapter by explaining some of the local idiosyncrasies of collective organization in the Southern Andes: while collectiveness and communal ownership are deemed sacred traits, the recent history of terrorism continues to shape the culture of collective behaviour.

The limits to Andean collectivism in the

“corridor of terrorism”

For Julia Hinostroza, the conflicts and tensions of collective action that I outlined in the previous section descend, in part, from the legacy of terrorism in the Sierra Sur. Although autonomous peasant action – in the form of *rondas campesinas* – contributed to the downfall of the Shining Path (Starn, 1999), one element of the legacy today appears as a fear of being seen to organise collectively. In Apurímac, one *kamayoq* still referred to terrorism cryptically as “the socio-political movement”, citing it for the delays and underperformances of collective

decision-making councils that suffered from insufficient support. In Cusco, meanwhile, a *kamayoq* pointed to the “idiosyncrasies” of the legacy of terrorism, which created the reputation that in rural areas “many [people] are liars”. These perceptions have compounded a political silence that stems from fear of participating in or speaking out for a cause: “if you do not know, do not speak; you speak that which is necessary... You go through this area and you shut your mouth... we’re not going to tell [our observations] to anyone, we reserve these things. So I’d say we are well reserved, we do not talk much”. As Kimberly Theidon put it, in Quechua the period of terrorism is referred to as the *sasachakuy tiempo* (‘difficult time’), and the “political violence is bracketed as a finite period in which normal moral codes were suspended, people engaged in the previously unimaginable, and many individuals grew strange unto themselves. It was a time most people fervently hope will never happen again” (Theidon, 2013, p. 3).¹¹⁶ Yet some customary traits have emerged as enduring legacies: the fear of talking, for example, was part of the politics of terrorism in the Sierra Sur as *campesinos* often feared being associated either with terrorist organizations or the National Guard. However, as Caroline Yezer (2008, p. 271) pointed out, these silences cannot be reduced to what she called an “irrational symptom of post-traumatic stress disorder”; rather, they are the product of rational insecurities and a distrust of the state that are often impossible or unsafe to articulate within the boundaries of formal conversation and politics. Pilar Roca (2013) has even argued that, in addition to commonly documented forms of colonial violence, the systemic operation of terror has cast a shadow over and created everyday forms of silence in the Peruvian Andes for centuries.

This combination of cultural legacies is personified in a disjuncture between the continuing romantic imaginaries of resistance in the Sierra Sur and the everyday politics of evading collective conflicts. The walls of the municipality of Kunturkanki, for example, proudly announce that this relatively new community – established in the 1950s as a truck stop known as El Descanso (‘the rest stop’; see chapter three) – stands in “the land of Túpac Amaru” (see **Figure 25**). Túpac Amaru was the last Inka noble, who was executed by hanging

¹¹⁶ Within this difficult time, Starn, Degregori, and Kirk (2005, p. 353) pointed to a more concentrated “time of fear” – or *manchay tiempo* – which refers to the period from the war’s escalation in 1983 to the defeat of the Shining Path at the decade’s end. Both terms are hybrids of Quechua and Spanish.



Figure 25 "The Land of Túpac Amaru" – a mural on the wall of the Kunturkanki municipal hall (photo by author)

in 1572 at the orders of the Spanish viceroy Francisco de Toledo. The mural, however, depicts the execution by quartering of Túpac Amaru II, which occurred some two centuries later, after he had upheld an Inka rebellion against Spanish colonial forces. Túpac Amaru II was born José Gabriel Condorcanqui – hence the municipal name – and he changed his name as part of his claim to being a direct descendent of the last Inka noble, Túpac Amaru. The violence that surrounded the Inka rebellion drove a wedge between the indigenous populations of the Sierra Sur and the creole and *mestizo* populations of the coast and capital – a situation not dissimilar to that which emerged in the context of the Maoist insurgencies in the 1980s.

Today, references to Túpac Amaru (II) include romantic gestures that suggest a degree of pride in ancestral histories and resistance to colonial forces. Yet the revolutionary verve of Tupac Amaru II is far from the consciousness or everyday practice of the majority of *campesinos*, who – by contrast – frequently evoke a rather sombre (and discursively performative) gratitude for the ‘advances’ brought by Spanish colonialism. This nominal

allusion to Túpac Amaru II, within the context of overt public displays of Túpac Amaru symbolism such as the mural, reflects the now tired use of Inka imagery to invoke a sense of rebellion and resistance. Túpac Amaru was also used, for example, as a symbol of Velasco's military revolution and of the cooperatives that emerged from it, but the narrative began to tire as the reality of the failings of Agrarian Reforms cooperatives affected the everyday lives of the *campesinos* more than a discursive battle between colonial legacies and Inka rebellions (Mayer, 2009).

However, the silences that emerge through a culture of fear are produced not just by terrorism and histories of violence against indigenous peoples of the Sierra Sur, but also by the subsequent neoliberal discourse that equated collective organization to terrorist ideals and activities. One of Alberto Fujimori's first moves as newly inaugurated President in 1990 was to sign his approval for the capture of the Shining Path leaders. He was quick to take the credit for defeating the Shining Path, subsequently won the support of business elites and embarked on an aggressive campaign against collective action in the Andes. The discursive effects of Fujimori's neoliberalization policies remain today; leaders and participants in anti-mining protests, for example, are frequently dubbed as terrorists by the media and among *mestizo* elites in wealthy coastal towns and cities. Thus, in contrast to Hays-Mitchell's (2002) account of women challenging neoliberalism in largely coastal urban areas of Peru (particularly around Lima), the Sierra Sur remains collectively silenced by a political discourse that promotes individual freedoms but places constraints on collectiveness. Is it possible, then, that the spatial patterning of the history of violence – where departments such as Ayacucho and Apurímac suffered some of the greatest losses (Theidon, 2013) – continues to shape the potential and outcomes of collective organization (especially given the successes in Cusco and difficulties in Apurímac)?

Commentators such as María Elena García and Kimberly Theidon have cautioned against building such a causal position on the legacy of terrorism. For the former, terrorism is all too often used as way of framing the mistaken discourse that the Peruvian Andes lack the kinds of social movements on display elsewhere in Latin America, and particularly the indigenous movements of neighbouring Ecuador and Bolivia. Not only did forms of social organization exist during the periods of terror despite and because of the violence, some of the oldest and most active indigenous organizations in Peru are found in areas that continue to be afflicted

with political violence. Using the case of education movements, García found that collective political action is an active component of Andean life but it occurs in clusters of political performances, resulting in a patterning of indigenous politics that is not a matter of absence but rather of strategic adaptation (García, 2005a). Likewise, Kimberly Theidon has refused to accept the divisive discourse of innocence versus guilt, emphasizing instead the tenacity of people who faced the years of devastation, and stressing the ways in which people continue to battle against and amend the torrid history of violence. Like García's spatial patterns of strategic adaptation, this process of making amends emerges as a patchwork of rebuilding everyday lives (Theidon, 2013).

We might, then, consider the varying performances and effects of collective organization and association explored in this chapter as part of the patterning of strategic adaptation and everyday re-building of lives and livelihoods in the Andes. The particular form and function of collective living reflects the selective inter-section of local cultures, turbulent histories, and broader narratives of change and structural transformation. Tania Li's 'communal fix' varies in its articulation according to spatio-temporal context – from British colonial strategies in India (T. M. Li, 2010) to TCOs in contemporary Bolivia (Anthias & Radcliffe, 2013), for example. Likewise, the collective fix analysed here reflects its contextual articulation in the Southern Andes of Peru, but one that is connected to broader strategies of establishing a diversity of land tenure and resource use rights that attend to the capacities and cultural needs of particular groups, while simultaneously using those rights to ensure the participation of these groups in processes of capitalist accumulation. The Polanyian thread to this approach to the collective fix is therefore about the creation of an institutional basis and a social framework for the production of goods and for the establishment of the rules of the game in the Southern Andes. The collective fix operates as a kind of institutionalized coordination and governance designed to support continued accumulation by simultaneously protecting the social framework for productive labour and ensuring that the outputs of such labour contribute to broader processes of value production (such as in the Peruvian government's remit for enhancing the productivity of rural areas).

Conclusion: diverse economies in the Andes

To recapitulate briefly, I have used the term *collective fix* to refer to the ways in which otherwise externalized populations and forms of production are internalized into processes of capital accumulation by virtue of their collective organization or association. This collectiveness simultaneously protects the group from the harshest effects of market participation, thereby ensuring their continued participation. This relation is ‘fixed’ in the sense that collective organization has become routinized (there is no need for fixed, bounded space, or a fixed spatial definition of the community), which in turn produces fixed investments, such as in the creation of collection and distribution centres.

Collectiveness has, therefore, become a fixed social relation on two counts. First, through generations of re-working collective relations in the Andes, Andean social life has adopted certain collective forms of social organization as quotidian. The presence of cooperatives and associations for all varieties of productive sectors, for example, is partly a product of the Agrarian Reform and the collapse of the large cooperatives that it established. Second, assumptions that Andean culture is defined by social organization have enabled ethnodevelopment programmes to instrumentalize this characteristic so that collectiveness both ensures market participation and protects the collective from the harshest effects of market participation. The notion of a ‘collective fix’ therefore helps to delineate the conflicting relations by which *alpaqueros* are increasingly bound. Collective action has also been cast negatively in political terms in the Southern Andes, and it is partly the routine element of collective economic organization that ensures its continued economic significance.

Without the notion of the *collective fix*, it would be difficult to understand the link between the promotion of collective commercialization by NGOs such as Soluciones Prácticas and the ambivalent, a-critical participation of *alpaqueros* in collective economic ventures such as cooperatives or associations. Rather than simply an inappropriately designed technical solution with unintended consequences – which may be part of the story – the *collective fix* helps to explain how contextual and historic forms of collective organization intersect with NGO visions of associations and the shifting dynamics of the alpaca industry in Peru.

The *collective fix* also cycles back to a Polanyian reading of economic embeddedness and integration. In chapter three, I explored how the *kamayoq* contributed to shifting relations of

economic integration within pre-Hispanic societies. In this chapter, I explained how forms of social organization assumed to have inherent historic value (e.g. *ayni*) fit within contemporary patterns of economic integration, as reciprocity, exchange, and communal solidarity intersect to shape the institutional basis and social framework of Andean economic practice. Andean ‘sacred values’ (reciprocity, collectiveness, and communal ownership) and Western forms of economic practice (market exchange and the money form) are becoming increasingly inter-dependent, as the former continue to structure Andean social life while the latter penetrates deeper into the Andes to incorporate increasing numbers of Andean households.¹¹⁷ This inter-dependency takes on contextual forms, as processes of marketization and neoliberalization begin to take shape ‘from within’ according to existing institutional patterns and histories.

In learning from Polanyi, therefore, we must maintain attentiveness to local and contextual factors, but without losing a wider vision of structural transformation (K. Hart, 2008). Future research might ask whether the forms of economic organization explored in this chapter can shed light on the spatial diversity of economic practice, thereby contributing to a still growing body of literature on ‘diverse economies’. For J. K. Gibson-Graham (2008), ‘diverse economies’ are built on an ontology of economic difference – an approach that risks boxing non-market and non-capitalist forms of economic practice (i.e. alternative economic ontologies) as distinct from their capitalist counter-parts. Taking a Polanyian approach to economic embeddedness opens fruitful avenues of investigation into the co-constitution of market and non-market forms of economic practice. Future research into the revival and/or persistence of Andean forms of socio-economic organization may therefore profit from such an approach in order to explore how economic diversity takes shape across time but in place- and culturally-specific ways.

¹¹⁷ I am reluctant to parse the recent revival of pre-Hispanic forms of socio-economic organization in terms of a double movement against market exchange as the prevailing form of economic practice. Polanyi’s later work on the economy as an instituted process is better placed and better articulated for explaining how various forms of economic embeddedness sit alongside each other and become inter-dependent, rather than simply counter-reactionary.

SEVEN

RE-VITALIZING ANDEAN LIVING WORLDS: KAMAYOQ, THE NEW YACANA, AND THE ‘RE-WILDING’ OF ANDEAN NATURES¹¹⁸

Just as we nurture the alpacas, they nurture us (Rengifo Vasquez, 1998, p. 109).

In this chapter, I continue to explore the tensions involved in pursuing the kind of Andean project of decolonization proposed by the likes of Grimaldo Rengifo, Eduardo Grillo, and the Peruvian organization PRATEC. As Rengifo’s comments above indicate, this body of work stresses the affective nature of alpacas within the Andean living world. In the previous chapter I explored the ‘sacred’ Andean values of reciprocity, collectiveness, and communal living, uncovering how the *kamayoq* intersect in variable ways with these characteristics of Andean socio-economic organization. In this chapter, the purpose is to once again interrogate the frictions between: on the one hand, the effects of the ever-proliferating development networks of international NGOs and multi-laterally funded programmes (which operate largely in concert with attempts to open up to capital investments and market forces to parts of the world currently deemed under-productive); and, on the other hand the aspirations to decolonize development in the Andes by strengthening Andean knowledges, supporting cultural re-affirmation, and re-placing development within the paradigm of an Andean living world.

In an attempt to over come this dichotomy, I address how the *kamayoq* reproduce human-alpaca relations according to a long but shifting history of internalizing the cultural-symbolic

¹¹⁸ My use of ‘vitality’ in this chapter is somewhat different to the notion of vitality developed in relation to the vibrancy and affect of non-living things, where these things act as “quasi agents or forces with trajectories, propensities, or tendencies of their own” (Bennett, 2009, p. viii). As I explain in this chapter, my usage descends from Andean cosmological understandings of breathing life into the world.

and material components of the Andean living community. I explore some of the pressures being placed upon this Andean living world by illustrating that although diversity and heterogeneity continue to be important components, they are also entangled within networks of commodification and the related circuits of capital. I place *kamayoq*-alpaca relations into theoretical debates around political ontology and animistic ontologies, proposing that the notion of ‘ontological positionality’ helps to disentangle the various relations and forces that shape species becoming in the Andes. This approach helps to explain why neither intimate and lively post-humanist geographies, nor political-economic accounts of a resourceful Andean peasantry, can alone provide a satisfactory explanation for the intersecting changes that currently characterize the Andes.

I use this framing first to explore the historic cultural-symbolic ties between the *kamayoq*, alpacas, and Andean sentient entities. I then introduce the contemporary alpaca sector, and the challenges faced by Andean *alpaqueros* (alpaca herders), before uncovering a world of bio-reproductive and bio-technological science that has emerged in recent decades to “refresh the blood” of Peruvian alpacas and ultimately improve their health and the quality of their wool (which is largely measured in economic terms). While alpaca genetic science has proliferated in recent years, few social scientific studies of the sector move beyond basic commodity chain analyses to connect: the genetic traits of alpacas; Andean *alpaqueros*; networks of knowledge and expertise; the role of alpacas in Andean lifeworlds; the contemporary globalized alpaca sector; and, the alpaca experimentation centres that have taken as their task the ‘re-wilding’ of alpaca genetics and the revival of the alpaca sector as a whole. In this chapter, I connect these elements, ultimately paying attention to how the *kamayoq* act as mediators in tying together and translating diverse political ontologies of human-alpaca relations. This role can be summarized via the contributions of two important interlocutors in the story: Carlos de la Torre – ‘Godfather’ of the *Kamayoq* School – and Alonso Burgos – co-founder and director of the (privately funded) alpaca research station, Pacamarca S.A.:

Paqocha means alpaca... ‘*Paqo*’ is animal, and ‘*cha*’ is with affect... It means to say the name with affection. (Carlos de la Torre, interview, July 2011).

I think that we need to change our approach and start thinking of ways of changing the small tenure of [alpaca] herds by very many different families, into a more organized and scientific

way, and an entrepreneurial way of breeding alpacas, because we're not going to be able to keep on breeding alpacas in the way it is right now (Alonso Burgos, interview, May 2013).

The *kamayoq* is the person who has the quality to transform the nature of the animal. It's somebody who has to know more than others; he has to show in practice that he is better. The *kamayoq* are respected because they have good animals (Carlos de la Torre, interview, July 2011).

The first contribution, from Carlos de la Torre, reflects what appears to be the inherently affective nature of alpacas: the very name in Quechua descends from the verb 'affect'; they are 'affective animals'. Yet this affect is difficult to explain in terms of Western understandings of nature: "how to convey the profound feeling of affection and respect that the peasant feels for the 'Mother Earth' (*la Pachamama*), or the joy and gratitude towards his or her mountain protector ('*Apus*') the peasant experiences on the birth of an alpaca who is treated like a 'new daughter'" (Valladolid Rivera, 1998, p. 51)? Carlos' second comment points to the fact that the *kamayoq* are assumed to possess a greater degree of connection to alpacas; indeed, they are endowed with the capacity to transform the animal – a belief that descends, as I explain below, from Andean animistic ontologies. Yet Andean animism is changing, as reflected by Alonso Burgos' dual desire: to modernize the alpaca sector and reduce a measure of its success to the rules of globalized neoliberal markets; and to protect the alpaca sector by revitalizing breeding and husbandry practices according to state-of-the-art scientific principles.

In this chapter, I therefore unpack what are often characterized as oppositional worlds: Andean animist ontologies and Western biotechnological reproductive sciences. Janice Nuckolls (2010) has revealed the difficulties of translating Quechua understandings and invocations of Andean lifeworlds into Germanic and Latin languages such as English and Spanish. Nonetheless, Eduardo Grillo (1998a, p. 128) tried to explain the difference between the 'Western' world and Andean living worlds:

Here [in the Andes] there is no world in itself differentiated from ourselves – unlike in the West where the whole is distinguished from the parts, or the contents from the container, and humans from nature – and about which one could speak in the third person: the world is this or that thing. No, here the world is ourselves. In our living Andean world all of us who exist are alive: not only humans, animals, and plants but also the stones, the mountains, the rivers, the gorges, the sun, the moon, the stars, and so on. In our world we live the equivalence of the diverse, the heterogeneous, because here the mosquito, the frog, the frost, the hail, the human, the mountain, the river are all indispensable in the delicate nurturance of our harmony; because

only this, our exuberant diversity, knows how to nurture our harmony, the one that belongs here, the one which knows how to nurture us.

Our community is not something in itself; it is not an institution, it is not something given or established. Our community is our way collectively to accommodate ourselves, according to what is fitting each moment of the continuous conversation which we sustain with the circumstances of life in order to continue living and generating. This is our form of life. Our community is not simply a human environment, rather it is all of us who live together in a locality: humans, plants, animals, rivers, mountains, stars, moon, sun.

I explore some of the pressures being placed upon this Andean living world, illustrating how the diversity and heterogeneity alluded to by Grillo has been an important but shifting component of Andean lifeworlds. These shifts are arguably more pronounced now than they ever have been, as the Andean community – the Andean living world – is increasingly commodified within global circuits of capital. As María Elena García explained in *Super Guinea Pigs*, “in fine restaurants in Lima and Cusco, it is increasingly common to find alpaca meat, something that would have been inconceivable a decade ago, when alpaca meat was only found in remote highland indigenous communities and towns” (García, 2010, p. 23). There is a growing sense that the connectivity within the Andean community is increasingly also becoming a globalized connectivity of commodity circuits. Intimacy is no longer confined to the nurturing of highland *chacras* and *hatos*, but extends to the tourist’s dinner table, as ‘authentic’ Peru is increasingly exported and Andean culture exploited as a resource.¹¹⁹

Second skin: intimate ecologies of ‘lively’ commodities in the Andes

Still covered in dust from his work with samples in the archaeology workshops at the Pontificia Universidad Católica del Perú, Peruvian archaeologist Jose Canziani explained to me that “territory is not something that is there, which is different from me. Nature is not different from me, I’m in nature, I am part of nature. Territory is, as they say in the Amazon, part of my body, it’s like my second skin”. These comments of course evoke the similar sentiments of Eduardo Grillo, and readers familiar with studies of cultures and natures in the

¹¹⁹ It is worth noting that I have not attempted a posthumanist account of *kamayoc*-alpaca relations here, and I do not pretend to have overcome a human/animal dualism that continues to position animals as subordinate to humans. Rather, my intention was to explore how the *kamayoc* connect the political-economy of the alpaca sector to the culturally diverse and historically constituted ways in which alpacas have been reproduced for millennia in the Andes.

Peruvian Andes will be familiar with such assertions. Yet they are also in danger of trivializing and romanticizing Andean lifeworlds in a way similar to that initiated a century ago by the *Indigenismo* scholarly trend. Daniel Gade (1999), for example, adopted the written form of nature/culture in an attempt to depict a mutually interactive skein of human and non-human components of Andean nature; that is, to conceive a holistic configuration capable of evading the now-institutionalized idea that nature and culture are two separate, often opposing forces. Yet to conceive of nature and culture as re-pieced together in this way traps us in a two-fold misapprehension: first, that these realms *exist* separately in the first place; and second that these realms can be *known* through the act of separation. This misapprehension reflects “an incoherent ontology in which things are imagined once to have been discrete” (Braun, 2005, p. 836).

To imply that Andean conceptions of the living world evade this incoherent ontology also risks romanticizing the ‘Otherness’ of an Andean worldview. A philosophical attentiveness is required when stating that Andean cultures deny the separation of humans from nature, particularly given that the Andean worldview is in fact built on dualities (but not *dualisms*). Andean cosmology is founded upon the sacred metaphor of the dual opposing forces of left and right (Starn et al., 2005); these forces pervade Andean philosophy and are understood to create an enduring ontological balance. Nonetheless, reality is not conceived as divided into opposing aspects and spheres; Andean philosophy embraces “polar dualities” rather than dualisms, and the founding principles of the former are relationality, complementarity, correspondence, and reciprocity (Estermann, 2009) (hence the ‘sacred values’ explored in chapter six). Thus, “divisions between subject and object, between the religious and the profane, between the divine and the humane, between the living and the inert, these...are not valid within the Andean cosmovision” (Estermann, 2009, p. 139). Andean philosophy therefore questions these distinctions that pervade Western ontologies and philosophy, and according to Estermann there is little point in attempting to balance or harmonize Andean and Western philosophical paradigms.¹²⁰

¹²⁰ One need not delve deeply into Andean philosophy to witness the importance of dualities to Andean society and culture: a quick visit to Cusco, following the well-established tourist routes between museums and archaeological sites, will reveal their centrality.

How, then, to begin understanding *kamayoq*-alpaca relations, given their historic centrality to the cultural-symbolic components of Andean life? One approach to these problems – which is common in geography – is to embrace a turn towards post-humanist perspectives in an attempt to compensate for the dualisms that have pervaded Western thinking for centuries.¹²¹ At its core, post-humanist geography is concerned with reconceiving materiality by focusing on the capacity of beings and things according to their relations with other beings and things. It revolves around a relational ontology that: rejects the premise that humans are the only beings (or indeed things) capable of a politics of action/agency; abandons the notion that humans exist in some way disembodied from a separate world of nature and other animals; subsequently confronts the difficulty of defining political subjects where the boundaries between humans and nonhumans are hard to discern; and, therefore, expands political reasoning to include nonhumans (Castree, 2003, pp. 207-208; Sundberg, 2014, p. 35). This relational approach attempts to overcome what Agamben (2004, p. 29) called the “anthropological machine”, which reproduces analyses of nature and culture in an image of its own humanistic self. To do so, emphasis shifts from seeking categorical (humanistic) answers to questions such as ‘what is [Andean] nature?’, to explicitly addressing the assumptions that underpin our attempts at understanding natural relations (Ingold, 1984).

Within animal geographies, attempts to break down these assumptions have focussed on stretching the limits of language, epistemology, and ethics, and on giving voice to experiences that seem impervious to our means of understanding (Weil, 2012, p. 6). This approach simultaneously reflects a barrier within animal geographies; any attempt by humans to speak for nonhumans opens itself to the critique that powerful groups are simply imposing artificial (or ‘ventriloquist’) forms of representation on marginalized or subaltern groups (Lucero, 2003, 2008; Spivak, 1999). In the Andean context, as I explained in chapter two on *llika* methodologies, this disjuncture is made all the more apparent by the fact that in the Quechua language, ideophony – the use of words to invoke sensory perceptions – is used to present nonhumans as “having articulate thoughts and as sharing many of the same moral values,

¹²¹ My purpose here is not to provide a review of post-humanist or animal geographies, but rather to identify what – if any – core tenets of post-humanist thinking might be useful for understanding *kamayoq*-alpaca relations. For overviews of post-humanist geographies and/or animal geographies, see: Castree (2003; 2004); Bridge and Smith (2003); Panelli (2010); Buller (2013, 2014); or Weil (2012).

talents, and foibles that people recognize among themselves” (Nuckolls, 2010, p. 4). To conflate Andean ontologies with a particular form of post-humanism is therefore problematic, and runs the risk of imposing Eurocentric values on Andean living worlds (Sundberg, 2014).

For Jamie Lorimer, however, giving voice to relational experiences among humans and nonhumans requires that attention be less on what is said, and more on what is done, by attending to gesture, conduct, affect, and behaviour in order “to witness multispecies becomings” (J. Lorimer, 2011, p. 200). Lorimer had previously explored such multispecies becomings in terms of animal charisma, arguing that the three lenses of ecological, aesthetic, and corporeal charisma can contribute to a ‘more-than-human’ understanding of agency and ethics (J. Lorimer, 2007). Aesthetic charisma and corporeal charisma are two kinds of affective charisma, the first centred on appearance and behaviour, and the second on practical, material interactions. Much could be written about these two forms of charisma for alpacas – take, for example, the strategic rearing of alpacas and llamas in and around Machu Picchu, for all the tourists to see. However, in this chapter I attempt to delve deeper into ecological charisma, which for Lorimer refers to the dynamic ways in which ecological entities are immersed in their environments and how they perform a number of core behavioural characteristics. I attempt to get beneath the surface of Lorimer’s perspective on ecological charisma, which merely portrays the external physical attributes of an animal: its visibility, including size, colour, shape, speed, and degree of movement...aural characteristics such as the presence or absence of a noise, call, or song and the frequency and magnitude of this sound” (J. Lorimer, 2007, p. 917). I explore the biological charisma of alpacas that underpin ecological charisma, but I do so not from a position of wonder or liminal affectedness, but by explicitly beginning from a political-ecological position that stresses continuous processes of structurally coupled “reflexive co-production” (Whatmore, 2002).

In her use of the term ‘reflexive co-production’, Whatmore put a firm Deleuzian inflection on her suggestion that we should move from an understanding of relational being to “relational becoming”. Significantly, this relational becoming, which is richly invested within a collective practice, shares affinities with the kind of Andean community, or living world, alluded to by Eduardo Grillo. Human and nonhuman inter-subjectivity, she argued, is “constituted in the context of practical or lived configurations of community”, which are not defined by abstract criteria, but by “always/already existing...contingent and particular social attachments”

(Whatmore, 2002, p. 153). The practice of what she called “participatory communalism” then emerges not as a collective of inter-connectedness among pre-existing entities, but as a condition of emergent potentiality that “harbours the very possibility of their coming into being” (Whatmore, 2002, p. 161). The collective becoming is therefore “a relational achievement spun between people and animals, plants and soils, documents and devices, in heterogeneous social networks that are performed in and through multiple places and fluid ecologies” (Whatmore & Thorne, 1998, p. 437).

How, then, might I explore this emergent collective charisma, paying specific attention to *kamayoc* and alpacas? Here it is worth recalling that in the Andes herds are also conceived as systems, networks, and structures; hence the unifying term of *llika*. This connection is important, as I explain below. First however, it is worth pointing out that Hayden Lorimer (2006) previously argued that the study of a herd marks the point where ethnography and ethology meet, where the social is in fact a relation between herders and herd. By focussing on intimate encounters with charismatic animals, and exploring how everyday engagements between herders and the herd are rooted in systems of ecological and cultural knowledge, Lorimer developed a kind of intimate ecology of reindeer herds in the Scottish Cairngorms. This intimate ecology wove together various detailed narratives of reindeer movements, activities, behaviours, collectivities, socialities, and knowledges (such as how to navigate the landscape), combining them with ethno-historical accounts of herders significant to the unfolding of reindeer herding in the Cairngorms. The outcome is a rich ethno- *and* etho-history, but by focussing on “situated circumstance” (H. Lorimer, 2006, p. 515) his account ultimately concealed two components that I seek to uncover in relation to Andean alpaca herding: the biological or genetic components of ecological charisma (without implying that they are given, predetermined, or determining); and the broader structures within which emergent and collective ‘comings-into-being’ take place.

This approach is somewhat reminiscent of Escobar’s (2008) adoption of the term autopoiesis, since I argue that herds and herders cannot be divorced from their structural coupling to broader environments.¹²² Escobar used the term autopoiesis as a pseudonym for

¹²² The term autopoiesis was coined by cognitive biologists Humberto Maturana and Francisco Varela (1980) in an attempt to encapsulate the dynamics of autonomy within living systems. They conjoined

auto-(re)production or self-production, but stressed that internal processes of self-production always occur in relation to the broader environments in within which they are enacted. In tension with broader political-economic shifts, he argued, traditional production systems are being re-shaped by their practitioners in order to re-claim a degree of control over the production of nature (Escobar, 2008). These shifts have brought about transformations not just in the instrumental use of nonhuman nature, but also in its very substance, thereby also transforming the very properties upon which nonhuman charisma is initially built. A recursive interconnection therefore exists between internal relations of self-(re)production and external relations of structural and environmental change. Or to put it in Escobar's (2008, p. 309) terms, "one may think of social and biological life in terms of a continuum of experience and matter that is both self-organized and other-organized".

To uncover these two elements – of bio-genetic charisma, and the structural coupling of intimate ecologies with broader political-economic environments – I expand out from the Andean notion of *llika* to address the networking of herds across the Andes, within the structure of the increasingly globalized alpaca industry.¹²³ This approach reflects some of the political-economy influenced approaches to studying human-nonhuman inter-relations – a path that was perhaps popularized by Nicole Shukin (2009) with her book *Animal Capital*. In *Dreaming of Sheep in Navajo Country*, however, Marsha Weisiger (2009) provided a detailed historical account of how shifts in Navajo sheep herding (Diné pastoralism) responded to changes in the broader environmental and political-economic terrain. Her account charted the unfolding relations between Diné patterns of transhumance (shifting grazing patterns) and largely external political pressures such as the role of reservations and the emergence of the New Deal (as an attempt at land conservation based on stock reductions and scientific range

the self (auto) with creation or production (*poiesis*). While Maturana and Varela's approach was couched in the language of systems theory, they described an autopoietic machine as one organized as a unified network of processes of production (transformation and destruction), which through their inter-relations and transformations continuously regenerate and realise the same network of processes (relations) that first produced them. Autopoietic machines are therefore defined by a relational network, not by the components themselves (in isolation). To understand the machinery of life, they argued, we must also understand these intra-relational networks: not just relations *between* things, but also the relations *internal* to things.

¹²³ My use of 'globalized' over 'global' is intentional: globalized or globalizing agricultural production "refers not to the entirety of agriculture across the world but a transnational space of corporate agriculture and food relations integrated by commodity circuits" (Le Heron, 2009, p. 558).

management). The undermining of Diné landscapes, along with the inter-dependent relations that underpinned Diné ontologies of pastoralism, served to intensify landscape changes such as desertification. While Diné over-grazing was somewhat to blame for a devastated landscape – suggesting that a collective ‘coming-into-being’ does not necessarily entail harmony within that collective – the scientists and technicians of the New Deal and the Navajo Reservation mistakenly understood range conservation as merely an ecological issue involving nonhuman animals and land; their approach to the human element of the relationship was merely economic. The point is that understanding the shifting dynamics of Diné pastoralism cannot be reduced neither to an intimate ecology of Diné-sheep-landscape relations, nor to a macro-economic perspective that casts the Diné as innocent victims of poorly conceived and executed Western strategies of conservation. Attention must be paid to the coupling of these elements, and to the encounters that entail.

Such encounters have occupied the work of Rosemary Collard, along with the various techniques that allow vitality to be capitalized within the global traffic of wildlife trade. “An animal’s commodity life”, she argued, “depends on its wild life even as it diminishes it profoundly”, thereby reducing it to an ‘undead thing’ (Collard, 2013, p. 152).¹²⁴ The creation of captive lively commodities, she argued, stems from the ability of wildlife trade to pull wild lives apart, to disentangle them “from their previous behaviours and ecological, familial, and social networks” (ibid.); we might call this a kind of nonhuman alienation, as the lively commodity becomes alienated from its nonhuman nature. In the exotic pet industry, then, the wildness of the lively commodity is fundamental, even as that wildness is torn from the animal in the act of producing the captive commodity.

In this chapter, I present a slightly different and yet complementary take on this fruitful line of investigation: alpaca-related commodities today are predicated on the notion of making the alpaca wild again – of discursively moulding it into something more akin to its wild cousin,

¹²⁴ Collard attributed the term ‘undead thing’ to Donna Haraway’s book *When Species Meet*. Yet in that book, Haraway only used the term ‘undead’ to refer to commodities according to Marx’s formulation of exchange value and use-value, which are based on his anthropocentric labour theory of value. The “undead but always generative commodity” to which Haraway referred is the commodity itself, not the animal component; hence her concern was with the moment that the already undead commodity “becomes the living, breathing, rightsendowed, doggish bit of property sleeping on [her] bed” (Haraway, 2008, p. 45). This kind of commodity is undead *and* lively.

the vicuña, and of materially ‘re-wilding’ alpacas through the process of genetic improvement programmes designed to undo generations of inbreeding. This is perhaps the “putting animals back together again” component of creating lively animal commodities, but it is one based at the genealogical level, rather than the behavioural level depicted by Collard (2013). In fact, this notion may better reflect Jessica Dempsey’s contribution to the ‘lively commodity’ concept, as she explored how mechanisms such as UN-REDD (Reducing Emissions from Deforestation and forest Degradation) re-commodify carbon in its living form: if the forest dies and carbon is emitted, the carbon no longer has any (economic) value – worse still, it incurs costs (Collard & Dempsey, 2013).

Interestingly, however, for the ‘re-wilding’ of alpacas to occur, they must be severed from their habitat *and* be maintained as part of a functioning ecosystem (in contrast to Collard & Dempsey’s opposition between wildlife trade as severing and carbon markets as maintaining). As I explore in this chapter, alpacas that are bred via human-induced and technological procedures and then raised in experimentation centres (which albeit mimic alpaca habitat), are partly responsible for breathing new wild-life into (domesticated) alpaca ecosystems, while all the time maintaining these relations within the frame of the pastoral production systems that have evolved over millennia since South American camelids were domesticated.

These relations do not just form a backdrop to the process of commodifying wildness. As María Elena García (2010) recently pointed out, the wildness of Andean culture – and its customs of eating Guinea pigs and alpaca meat – is also bound up in the lively commodity. These products are therefore increasingly marketable at the global scale partly due to a discursively produced wildness of commodified Andean culture as a whole. Ironically, however, some scholars of economic development have argued that for such commodification to continue (which they see as positive potential for the development of Peruvian economic markets), Andeans must learn to break with their culture by creating clear and clean separations between humans and nonhumans, even as the commodified form of these animals relies on a simultaneous commodification of Andean culture (García, 2010).

Neither are these relations simply economic; they are also political. In the Andean context, Marisol de la Cadena has illustrated that it is not simply nonhuman animals that fall outside of Western epistemologies and ontologies:

“the ‘things’ that indigenous movements [in Peru] are currently ‘making public’ in politics are not simply nonhumans, they are also sentient entities whose material existence – and that of the worlds to which they belong – is currently threatened by the neoliberal wedding of capital and the state... these objects are contentious because their presence in politics disavows the separation between “Nature” and “Humanity,” on which the political theory our world abides by was historically founded” (de La Cadena, 2010, p. 342).

These sentient entities – mountains, water, soil – what ‘we’ (according to Western ontology) call ‘nature’, have been brought into the political arena as a “historic-political articulation of more than one, but less than two, socionatural worlds” (de La Cadena, 2010, p. 347), and certainly not the ‘third’ result of a mixture (like a hybrid). I pointed to some of these sentient entities in chapter three, and I return to them in what follows in this chapter. However, de la Cadena’s point also raises the issue of engaging politically in the idea that there exists multiple living worlds, or multiple ontologies: “a multiplicity of worlds animated in different ways” (Blaser, 2014, p. 49).¹²⁵ For Tim Ingold, these worlds are relational, since beings do not spring forth from one ready-made world, but rather “*issue* forth through a world-in-formation, along the lines of their relationships” (Ingold, 2006, p. 9).

Recently, Mario Blaser (2009c, 2009d, 2014), has taken this debate forward by embracing the notion that ontology itself necessitates a particular politics, especially given that the very term ontology points to the existence of (multiple) ‘worlds’. Moreover, ontologies perform themselves into worlds, and at times the distinction between worlds is not entirely clear. Recall, for example, the contemporary performance of *kamayoq* lifeworlds, as exhibited by César in chapter four, which internalizes a tension between Andean knowledges, practices, and ontologies – on the one hand – and Western notions of technology, technique, science, and progress – on the other hand. This is, in a way, an internalization of different worlds or ontologies. Blaser (2009c, p. 877) also pointed to the connections between ‘myths’ and practices, to the ways in which ontologies manifest as ‘stories’ that embody assumptions of what kinds of things and relations make up a given world and make it readily graspable. Importantly, these stories need to be embodied and enacted, which links back to Lorimer’s

¹²⁵ While Blaser’s comment points to animation, I have generally chosen not to engage with the diverse field of ‘animist ecologies’, which sit closely alongside the kinds of spiritual ecologies that blandly call for treating earth with respect and reverence. For useful discussions of animist ecologies, see Sullivan (2014) and Ingold (2006); for a debate on the usefulness and practicability of spiritual ecologies, see the exchange between Leslie Sponsel and Andrew Vayda (Sponsel, 2012, 2014; Vayda, 2014a, 2014b).

concern with material (inter)actions over discursive proclamations. As I illustrate in this chapter, these stories can be mythical in multiple senses: as Andean celestial philosophies of animating life on earth, and as capitalist desires for particular embodiments of Andean ‘wildness’, for example.

Derived from this understanding of multiple worlds, Blaser’s use of the term ‘political ontology’ carries two related meanings: “it refers to the politics involved in the practices that shape a particular world or ontology”; and “it refers to a field of study that focuses on the conflicts that ensue as different worlds or ontologies strive to sustain their own existence as they interact and mingle with each other” (Blaser, 2009c, p. 877). At the risk of acting as Mario Blaser’s ventriloquist, I suggest interpreting these two meanings as: a politics of ontology, where the politics is somewhat internal to ontology (political debates take on the subject of ontology); and, as an ontological politics, where ontology is used (at times instrumentally) for broader political debates and purposes. As Annemarie Mol (1999) previously put it (drawing on John Law), questions of ontological politics have to do with how the ‘real’ is implicated in the political. She therefore approached medicine’s ontological politics as one that “has to do with the way in which problems are framed, bodies are shaped, and lives are pushed and pulled into one shape or another” (Mol, Smith, & Weintraub, 2002, p. viii).

Marisol de la Cadena (2010) has attended to a similar ontological politics the Peruvian context by exploring how the historical ontology of Andean worlds is entangled with organized forms of indigenous politics, as sentient entities are given presence as political actors. She later described the ‘bed-fellowship’ between ontology and modern politics in terms of a pair of complementary opposites (i.e. Andean dualities): politics engages change, which is limited by ontology; to work together they require a third partner – history – to explain it all. Thus a politics of ontology is not just about the process whereby practices-entities-concepts co-constitute each other, it also an enactment of modern politics itself as it determines what is and what is not the matter of politics (de la Cadena, 2013).¹²⁶ As Mario Blaser (2014) pointed

¹²⁶ Fabiani Li (2013) illustrated a similar point in analyzing in invocation of sacred components of the Andean living world within the discourses presented in opposition to the Yanacocha gold mine in Cajamarca.

out, the recognition of *Pachamama* in the Bolivian and Ecuadorian constitutions is a very literal, formalized outcome of the politics of ontology.¹²⁷

In this chapter, however, I attempt to show that a politics of ontology shapes *kamayog*-alpaca relations. In drawing on Blaser's proposition that political ontology can represent "a problem space, and a modality of analysis or critique" (Blaser, 2014, p. 55), I suggest that – especially with global entanglements of commodities and cultures – there is nothing fixed about the relationship between cultures and ontologies. There exists, by contrast, an ontological positionality that both forms and emanates from the political ontology described by Blaser. The notion of ontological positionality is not about assuming a morphological form in research and/or politics; rather, it is about recognizing political ontology in practice. This practice does not necessarily entail an oppositional position (of either/or), and neither is it necessarily an explicit formulation of our individual ontologies. Rather, if ontology is mobilized politically, as Blaser has outlined, then a degree of everyday positioning within and between these ontologies must be practised. Ontological positionality is therefore about the everyday politics of being-in-the-world (rather than, say, a kind of political manifesto about being-in-the-world). When I explore the bio-technologies of alpaca reproduction in the Andes, therefore, I do not aim to prioritise the politics of any particular ontology and the processes contained therein, whether the 'traditional' pastoral systems and cultural-symbolic practices that underpin the Andean living world, or the Western science and technology associated with alpaca research stations. Both are inter-twined within the process of reflexive co-production, and both are part of the politics of shaping Andean living worlds today. Ontological positionality is about recognizing the everyday articulations of political ontology: seeking to understand a differentiated everyday politics of ontology; and, making reflexive decisions about engaging in ontological politics.

Veronica Groke (2014) made a similar case in relation to the Bolivian lowlands, where an "intra-communal politics" reflects the political relations between people and spirit beings,

¹²⁷ A large body of work – emanating from anthropology, geography, and inter-disciplinary approaches to science and technology studies – has contributed to what has been loosely described as an 'ontological turn'. This work addresses the politics of matter and of things, broadly speaking. Space constraints prevent a full discussion of this literature here. I have draw on select authors according to relevance: Mario Blaser due to his focus on herds; Annemarie Mol for her focus on bio-medical science; and Marisol de la Cadena for her focus on Andean ontology.

which – she argued – stands in contrast to the a-political ontological vision of categorizing these entities into distinct fields within a unified cosmovision. Similarly, I argue that *kamayoq*-alpaca lifeworlds do not reflect an alternative ontology to be romantically kept separate from, or instrumentally internalized within, a Western ontology. Rather, these relations are positioned according to their political ontology. The *kamayoq*, *alpaqueros*, NGOs, government programmes, private and university research centres, expert bio-technologists, veterinarians, and genetic scientists are just a few of the human agents and institutions involved in shaping the political ontology of alpaca (re)production in the Andes. So are the biogenetic and cultural traits of alpacas, which I explore below, and the ways in which these traits intersect with broader political-economic structures and shifts.

In addition to a methodological principle for engaging in multiple worlds, therefore, ontological positionality means: a) identifying how different actors (collective and individual; human and nonhuman) are aligned with particular political ontologies; and b) uncovering how these actors engage in particular representations of these ontologies. Importantly, I do not mean to imply that such an ontological positionality is entirely optional, nor that individual entities are necessarily free to choose their own positions. Ontological positionality emerges from dynamic, already existing and emergent becomings, from political ontologies that both circumscribe and open up opportunities. In what follows, I attempt to tell a story of ontological positionality, ranging from the cultural components of Andean lifeworlds, through the bio-technological and political-economic influences on Andean conceptions of alpaca vitality, to the role that the intersections between the *kamayoq* and transnational NGOs play in shaping ontological positionalities – and ultimately ontological politics – in the Andes. Ultimately, I propose that this coming-together produces a ‘vital economy’ in the Sierra Sur, as the ‘re-wilding’ of alpaca populations reflects diverse ontological positionalities in terms of breathing vitality into these sacred, important components of both the Andean living world and the Peruvian political-economy.

The cultural-symbolic reproduction of alpacas

To understand contemporary *kamayoq*-alpaca relational becomings, it is necessary to return to some of the ways in which the *kamayoq* have historically upheld cultural-symbolic

components of Andean life in their role as channelling forces of animation. In chapter three, I argued that the root verb ‘*kamay*’ was interpreted as animation, as the ability “to charge with being, to infuse with species power” (Salomon et al., 1991, p. 16). The *yanca kamayoq* personified this interpretation by mediating relations between the *Yacana*, sacred mountains, and camelids (alpacas and llamas). This *Yacana* was said to be an animator (‘*camaquin*’) of alpacas and llamas, as it “moves through the middle of the sky” (de Avila, 1991, p. 132) before descending upon earth to “infuse a powerful generative essence of llama vitality, which causes earthly llamas to flourish” (Salomon et al., 1991, p. 16).¹²⁸ According to the *Huarochiri Manuscript* – a testament of Andean religious and spiritual ideas commissioned by Cusco-born Father Francisco de Avila at the end of the sixteenth century (Salomon et al., 1991) – the *Yacana* was at the centre of a set of ritualized practices that reproduced camelid populations:

They say if a man was in luck and fortunate, the *Yacana* would fall right on top of him...As its woolly bulk pressed down upon him, someone else would pluck out some of its wool. That apparition would occur at night. In the morning, at daybreak, the man would look at the wool he’d plucked out. Examining it he’d see the wool to be blue, white, black, and brown, of every hue, thickly matted together. If he had no llamas, he’d worship at the place where he had seen the apparition and plucked the wool, and trade for some llamas right away. After worshipping he’d trade for a female and a male llama. Just from the two he’d bought, two or three thousand llamas would soon come (de Avila, 1991, pp. 132-133).

It is worth bearing in mind this reference to the colours of the wool – an aspect I return to below. Overall, however, the above process describes “the transmission of vital force from an animating source (*camac*), generally a regional god or an ancestor [the *Yacana*], to an animated (*camasca*) being or object [earthly camelids]” (Howard, 2002, p. 18). For Gerald Taylor – a respected interpreter of earlier colonial chronicles of Andean life – a *camac* was an entity above and outside of terrestrial reality, acting as a prototype of earthly instantiations and charging them with their specific essence and energy (Salomon et al., 1991, p. 132; Taylor, 1974, p. 234). In Andean cosmology, “all the animals and birds on the earth had their likeness in the sky, in whose responsibility was their procreation and augmentation” (Juan Polo de

¹²⁸ The term *camaquin* can be considered a synonym of *camac*, which descends from the verb *camay* – defined in the *Huarochiri Manuscript* as ‘to charge’ or ‘charge with being’, ‘to make’, ‘to give form and force’, or ‘to animate’” (Salomon et al., 1991, pp. 45, 131). This interpretation places emphasis on the ability to create charge, to give energy; it becomes “a concept of specific essence and force, hence ‘to charge with being, to infuse with species power’” (Salomon et al., 1991, p. 16).

Ondegardo [1554], in Salomon et al., 1991, p. 131). Hence, Grillo (1998a) included celestial elements in his notion of an Andean community or lifeworld, and Rengifo (1998) emphasized that human-nonhuman relations are part of the collective responsibility of the *carguyoc* (similar conceived as the *kamayoc*).

For Andean societies, then, the *Yacana* was more than a constellation that accidentally mirrored life on earth, but the corollary to its animating capacity was its ability to affect the worldly systems that Andean societies relied upon. When the *Yacana* descended to earth, it drank from springs, “bringing water from below [the earth]” (de Avila, 1991, p. 83), and “in the middle of the night, when nobody is aware of it, the *Yacana* drinks all the water out of the ocean. If the *Yacana* failed to drink it, the waters would quickly drown the whole world” (ibid. p133). Salomon dismissed this as a cosmological metaphor, linking the ways in which camelids descend from high mountain slopes to drink at lower altitudinal waterholes and the process of evaporation, whereby the atmosphere “drinks” water from the oceans (Salomon et al., 1991). Nonetheless, if the *Yacana* failed to drink from the oceans, it was said that an earthly llama would warn a pastoralist that “in five days, the ocean will overflow... and the whole world will come to an end” (de Avila, 1991, p. 51).

The *Yacana* would also cause storms that would bathe earth and create the snow-capped mountains that were revered because “that is where their water comes from” (de Avila, 1991, p. 83). These snow-capped mountains acted as another link between the cosmological, material, and symbolic component of Andean cultural-natures: “people go to Paria Caca [a sacred mountain] in order to worship...People run a race on their way...driving their llamas and bucks...The first llama to arrive at the mountain top was much loved... The *yanca camayoc* would display it and praise it before all eyes, announcing, ‘The bearer of this llama is very fortunate’” (1991, p. 72).¹²⁹ These much loved camelids were those touched by the *Yacana* with vitality, becoming prized breeding stock. Interestingly, the cultural-symbolic importance of the *Yacana* would come full circle every year in the month of *camay*, when llamas and alpacas were sacrificed in order to mark the end of a month-long fast, and the set of camelids to be used in the following year’s ceremony were consecrated (Rowe, 1946).

¹²⁹ While the *Huarochirí Manuscript* referred specifically to llamas, there is nor reason to assume that alpacas were not a part of the same ceremonies, given that mixed herds were the norm (Rostworowski & Morris, 1999).

These connections hint at an Andean ontology that is neither entirely symbolic nor theistic in the sense of an omnipotent creator (which historians deny was a component of pre-Hispanic Andean spiritualism or mythology). In linking various elements of the Andean living world, these interpretations reveal an understanding of earth's systems: water, mountain ice, celestial patterns (i.e. the time of year), animal behaviours, and human livelihood needs interconnect according to annual cycles that served to govern human-nonhuman inter-relations and reproduce Andean living worlds. These links were reproduced by *kamayoq* in a variety of ways: in addition to the *weša* and *paqocha kamayoq* (shepherds and alpaca herders, respectively; see chapter three) who provided expertise in intensive pastoral practices, *guaca kamayoq* provided links to the sacred elements of Andean life, including the snow-capped mountains and animators such as the *Yacana*. Moreover, the annual mountain llama race described above was arbitrated by the celestial reading *yanca kamayoq*: “a man of the [local] *ayllu* functions as officiant for these ceremonies...as for their title, it was *yancacamayoc*...This man observes the course of the sun from a wall constructed with perfect alignment. When the rays of the sun touch this calibrated wall, he proclaimed to the people, ‘Now we must go...’ (de Avila, 1991, p. 72). In linking these elements, activities, and rituals, *kamayoq* reproduced the conditions necessary to sustain the Inka regionalized production systems, particularly given that the symbolic components of Inka domination – relating to ritual, traditions, landscapes, ancestors, and nature – have often been neglected (Acuto, 2005).

The ways in which Andean lifeworlds were governed by these inter-relations is not simply a lost pastime of pre-Hispanic socio-cultural organization, as Eduardo Grillo would have been keen to point out. In an almost autopoietic sense, contemporary *kamayoq* are participating in the cultural revival of the symbolic components of alpaca reproduction that defined pre-Hispanic Andean societies. The BioAndes programme, for example, emphasises the value of reviving alpaca raising practices in accordance with the pre-Hispanic Andean calendar, and their guidelines have been adopted in recent training by Soluciones Prácticas as well as in IPEBA's list of functional fulfillments for camelid reproduction (see appendix 4).¹³⁰

¹³⁰ BioAndes is a regional biodiversity conservation programme in the Andean region of Bolivia, Peru, and Ecuador. The programme's aims are to strengthen economic, sociocultural, and political processes for biodiversity conservation on the basis of livelihoods and knowledge exchange. The programme is

Components of the calendar include the *t'inkay* (or *ch'allay*), which is a bi-annual ritual carried out in honour of the alpacas and llamas in February and August, and which consists of throwing them barley and *chicha* (typical corn-based beer) in order to thank the *Apus* (divinities of the mountains) for providing strong animals with healthy wool and meat. This is, of course, evocative of the consecration ceremony mentioned by Rowe (1946), and even the sacrificial ceremonies described in Guaman Poma's (1615/1616) chronicles are promoted today, albeit in the symbolic form of *claw t'inkay* (symbolically offering breeding alpacas to sacred condors and foxes). These continue today, as one *kamayoq* described it, as a form of "payment to our Pachamama [mother earth]". Other gestures include *paqocha q'osñichiy*, a ritual ceremony among alpaca breeders of burning a dry alpaca foetus and making it smoke in the corner of the alpaca corral. The purpose is to ensure that the alpaca gestation period is completed successfully and healthily, hence the ceremony being performed in the birthing months of August and September, after which the herd is moved back to the pastures for grazing.

While symbolism dominates these ceremonies, others combine such mythological components with practical forms of knowledge that are congruent with contemporary scientific practice. *Ama puskana* is a period in August of not spinning or weaving alpaca wool. This is partly because in the month of August the wool belongs to *Pachamama*, but there is also a practical-symbolic importance: during this period, female alpacas are in advanced gestation, and aware of this fact, herders fear that weaving or spinning wool may invoke the tangling of the foetus with the umbilical cord. I do not mean to romanticize superstition; rather the awareness of the links between pastoral practices, animal care, and potential problems during gestation is significant, and it is one that is being recovered via contemporary programmes to train and re-establish alpaca-raising experts such as *paqocha kamayoq*.

The point here is that the *kamayoq* and the NGOs that train them are re-promoting these cultural-symbolic components; NGO programmes appear to be required to reinvigorate these historical cultural links to nonhuman nature, to the "second skin" of Andean culture. These components are not something given or inherent to *all* Andean life; without the influence of a

governed by the consortium of the Universidad Mayor de San Simón in Bolivia, the Eco Science Foundation of Ecuador, and Association ETC Andes in Peru.

transnational network of organizations and programmes, these links would perhaps become somewhat benign cultural idiosyncrasies rather than constitutive elements of Andean lifeworlds and human-alpaca relations. I have discussed these components not with the intention of romanticizing an imaged past of Andean harmony, nor to imply any degree of scientific validity (or not) according Western understandings of animal reproduction. Nonetheless, the fact that these practices continue, and indeed are being re-strengthened, affects the ways in which the predominantly rural alpaca-herding sector intersects with the increasingly globalized sector of producing and marketing alpaca-derived commodities.

In what follows, therefore, I explore how the *kamayoc* are caught in this world, between the re-affirmation of cultural values involving alpacas, and the commodification of human-alpaca relations for increased productivity, competitiveness, and (market) value. I begin by sketching the structure of the contemporary alpaca sector, before turning to the emergence of a new technonatural *yacana*, embodied in the rise of techno-scientific and bio-technological processes in alpaca research, breeding experimentation, and husbandry practices.¹³¹ The *yacana* of scientific rationality has displaced the celestial *camaquin* to bring new forms of vitality and species power to alpaca populations in the Andes. In the sections that follow, I draw attention to two inter-connected realms within which the technonatural *yacana* is affecting alpaca populations: reproduction and genetic improvement; and, the effects of genetic experimentation, animal health, and nutrition on alpaca wool as a disembodied commodity. I then bring the conversation back to the *kamayoc* specifically by discussing whether and how they might be helping to extend the reach of the technonatural *yacana* into the furthest reaches of the Andes.

¹³¹ While I capitalized the name ‘*Yacana*’ when referring to pre-Hispanic socio-mythological practice, in referring to the modern techno-natural *yacana* I use the lower case to avoid invoking the constellation figure depicted in Andean mythology. I use the term simply to imply that there is a new focus for the faith being placed in breeding practices.

Traditional livelihoods or globalized production networks? The contemporary alpaca sector

Camelids were among the first animals to be domesticated over 5,000 years ago, and initial taxonomic rankings divided the genus *camelus* into the two species of *Camelus dromedarius* and *Camelus bactrianus*. Since then, four different species have been identified: alpaca, llama, guanaco, and vicuña. While the vicuña was initially categorized as a separate genus, the most recent genetic studies divide the four species evenly across the *Lama* genus and the *Vicugna* genus (Kadwell et al., 2001). Under the former, the llama (*Lama glama*) is the domestic cousin of the wild guanaco (*Lama guanicoe*); under the latter, huacaya and suri alpacas (*Vicugna pacos*) are the domesticated cousins of the wild vicuña (*Vicugna vicugna*) (La Manna, La Terza, Ghezzi, et al., 2011; Tibary & Parish, 2006). Under the Inka, alpacas and llamas were important both productively and symbolically, but the division of production functions within the Inka state created the conditions for a deterioration of alpaca populations for local or community use. The Inka nobility, which arrogated to itself the rights to all agricultural and grazing land, as well as domesticated and undomesticated biota, divided camelids according to royal or religious herds (*capac llama*, literally ‘rich herds’) and community herds (*huacchac llama*, literally ‘poor herds’) (Rostworowski & Morris, 1999). Prized breeding specimens were reserved for the former, while the latter relied on local collective mechanisms for sharing sires within associations of households or communities, thereby risking the deterioration of genetic diversity amongst the local alpaca population. It is somewhat surprising, then, that the FAO would promote these kinds of “traditional breeding institutions” as an important resource for conserving animal genetic resources (Food and Agriculture Organization, 2009). Indeed, it is arguably the persistence of such localized breeding practices that many research institutes are currently attempting to overcome.

According to the Peruvian National Institute for Agrarian Innovation (INIA), of the 5 million domesticated camelids across the globe today, 3.5 million are alpacas, of which the vast majority – 87 per cent – are in Peru, with 9 per cent in Bolivia, and most of the remainder distributed between the USA, New Zealand, Canada, and Australia, and to a lesser extent in Europe. The most important regions for the alpaca industry in Peru are Puno (with over 1.5 million alpacas), Cusco (400,000), and Arequipa (380,000), within which eighty-five percent

of the alpaca population is from the huacaya family and fifteen percent is suri. While the current demographic structure of the Andean alpaca population is based on primary populations (primitive breeds) that emerged from natural selection (La Manna, La Terza, Dharaneedharan, Ghezzi, & Arumugam, 2011), there are currently only two systems of alpaca breeding that are practised internationally.

First, traditional Andean herding strategies persist in the pastoral economies of the Andean highlands, which rely on high altitude pastures over 3,000 metres above sea level (masl). Above 3,800 masl, in an altitudinal zone known as the *puna* these pastures are the only form of agrarian activity, due to the inability to cultivate crops; in the *suní* (3,400-3,800 masl) and *quechua* (3,100-3,400) zones, however, livestock herding is combined with various associations of crops, such as potatoes and traditional Andean grains such as quinoa.¹³² Second, there is a proliferation of alpaca breeding at more favourable low altitudes (no more than 800 masl), where they are bred both for fibre production and – in countries such as the United States and Australia – as companion animals. In Peru, the former system predominates, with ninety-five per cent of the alpaca population residing at high altitudes under traditional extensive systems characterized by low productive and reproductive parameters. Nonetheless, alpacas continue to be an important livelihood resource, and are bred in the Andes for meat production largely for subsistence or local markets, while economic gains are derived chiefly from fibre production, which generates eighty-two per cent of the worldwide demand for sires (breeding males), and provides income for more than 500,000 families in the *altiplano* (Ministerio de Economía y Planificación Del Perú, 2004).

The difficulties facing rural alpaca herders are numerous, not least due to their political-economic and cultural marginalization. In terms of breeding, however, low productivity and reproductive performance has been attributed to the limited number of good quality sires due to the high degree of inbreeding (30-45 per cent), which not only causes malformations but also further reduces fertility (Huanca, 1993). The sector is also having to manage a legacy of hybridized alpacas and llamas, carried out in order to obtain a heavy fleece, since the textile industry previously paid for fibre (wool) by weight rather than by diameter (as a measure of

¹³² For an account of how this high-altitude pastoralism has historically integrated vertically with production systems at lower altitudes, such as in the valley bottoms, see Murra (1995, 2009) or Mayer (2002).

the fineness of the wool) as it does now (Wheeler, Russel, & Redden, 1995). As I explain below, there are also other limiting biological reproductive characteristics of alpacas, including a long gestation period (11.5 months) and a long interval between birth and sexual maturity in males, which makes it difficult to achieve genetic gains within traditional breeding systems and commonly observable timelines.

Compounding these issues, there is also a high incidence of parasitic disease (which *kamayoq* are specifically trained to cope with), including external parasites such as ticks that damage the fibre and the skin, and internal parasites such as *Fasciola*, *Haemonchus* and *Taenia*. These parasitic infestations increase animal vulnerability to infectious diseases such as *Clostridium*, *E. Coli*, *Spherophorus*, *Streptococcus*, and *Giardia duodenalis* – all of which contribute to high mortality rates amongst crias (alpaca offspring), thereby reducing the supply of young replacement animals and slowing potential rates of genetic improvement (Gomez-Puerta et al., 2014). The effects of the parasites on the animals are immediately apparent, as they appear malnourished and neglected, in a state of chronic wastage, and prone to more erratic behaviour. As *kamayoq* Guillermo once demonstrated – during an afternoon of catching and treating young alpacas with an external insecticide largely made up of Diazinol – the parasites are so prevalent that when he pulled back an animal’s wool, we saw the skin crawling with small, white maggot-like creatures that were dug into the alpaca’s skin and writhing (perhaps in discomfort at exposure or in a feeding frenzy).¹³³

While I struggled to contain my displeasure at the sight (partly due to the aesthetic and corporeal ‘charisma’ of the parasites, I suppose), Guillermo nonchalantly plucked a few of the parasites from the alpaca, before flicking them to the muddy, faeces-strewn ground, thereby not only risking his own health but also the infection of any other animal due to pass by (given that we were chasing the alpacas around a corral that was crowded full with another sixty or so animals). Sometimes, however, it isn’t even necessary to pull back the wool, Guillermo explained, as particularly prevalent infections can cause patchy balding, which is most apparent on young or freshly shorn alpacas. When these infected animals are brought into close contact, there is little that can be done to prevent the parasites from spreading; it was a

¹³³ If I were conducting a Jane Bennett-like (2009) account of the affective nature of alpaca-related assemblages, I might have opened the chapter by expanding on this anecdote.

good thing that Guillermo had the Diazol Plus on hand, which is not normally the case amongst the *alpaqueros* of Apurímac's *puna* highlands.

Traditional alpaca management in the *puna* has therefore struggled to overcome these limitations. In addition to intra-household or community scales of sharing breeding sires, everyday practices of alpaca management are minimalist, as alpacas tend to roam large tracts of unmanaged pastures, before being corralled in the evening to one particular enclosure. Relatively infrequently – during breeding times, shearing, or attempts to isolate diseases – alpacas are corralled into the traditional stone-walled enclosures that can be seen dotted across the hillsides. While *alpaqueros* tend to rise with the sun and immediately head out to tend to their herds, hands on management is limited to important times of years. Even during breeding season, for example, male and female alpacas are selectively combined into small enclosures, before being left alone in the hope that breeding occurs; artificial insemination remains a rare practice across the Southern Andes. Similarly, when diseases are noted, they are usually tackled through separation, rather than with coordinated preventative care.

For the alpaca industry, these practices are a hindrance to genetic advancement, and they jeopardise the future of the industry as a whole. Alonso Burgos encapsulated the dilemma that faces the industry, which is simultaneously invested in *maintaining* rural alpaca production so as to prevent the bottom from falling out of what is historically one of Peru's most important sectors. For Burgos, we must shed the false assumption that there exists a pool of traditional Andean knowledge capable of improving and maintaining alpacas in the long term; we must shed these views for both the economic and cultural future of the alpaca sector:

Traditional science is a myth – there's no traditional breeding. Traditional breeding is basically peasants that have the animals because they've always had them, and they take them out in the morning and take them in in the evening and that's pretty much it. So I don't think there is any kind of science, or tradition, or knowledge, or anything involved with doing that. It is just survival, a traditional kind of thing of having this type of animal, but there's nothing really magical about that. I'm probably one of the most persistent and fanatic lovers of alpacas in Peru and of the whole world that runs around alpacas. But we have to be realistic: when people talk about the knowledge of the Andean communities on alpaca breeding and so on and so forth, I absolutely disagree, because I think there is no knowledge there. I mean, the very little knowledge that there was has been lost...

...The alpaca operations have to be much larger, much more technical, and much more modern, if we want to pretend to have the alpaca production alive and going 50 years from now. As much as I love the traditions and as much as I love the beauty of things, and you know I have great respect for the history and the people involved, it's all so very nice and it's all so

very real. But fifty years from now, things are going to be changing in such a rapid way that it's either that we approach it differently, or we're not going to have any more alpacas being produced in Peru (Alonso Burgos interview, May 2013).

Part of the remit of the *kamayoq* being trained under Proyecto Paqocha in Apurímac is to improve the handling of alpacas in these regards: to enhance selective breeding practices and techniques; improve animal health practices and nutritional management, and refine shearing and wool handling techniques. This process begins meeting Burgos' demands for the 'technification' of the alpaca production, but in a way that meets the needs and knowledge capacities of the *alpaqueros* themselves – it is an attempt at establishing a middle ground somewhere between PRATEC's decolonization agenda and Burgos' neoliberal, modernist visions of mechanization and capitalization. As Burgos' comments indicate, however, Soluciones Prácticas and the *kamayoq* are not the only ones with a vested interest in improving alpaca production and reproduction in the Andes. A network of scientific and experimental research centres has proliferated in recent decades, as government institutions such as INIA, national universities such as San Marcos in Lima with its field sites in Cusco and Puno, and private sector initiatives such as Pacamarca Sustainable Alpaca Network have invested in long-term programmes designed to reinvigorate the alpaca industry in Peru. In what follows, I explore the links between these programmes and the role of the *kamayoq*, beginning with the rationale and process associated with the research centres, before re-connecting them to the *kamayoq*.

“Refreshing the blood”: an autopsy of the new techno-natural *yacana*

The international recognition of South American camelids and the fibre that they produce has led to a number of programmes over the past two decades that have focussed on introducing biotechnologies of reproduction (Miragaya, Chaves, & Agüero, 2006). The overall aim has been to improve animal genetic resources and to overcome the dearth of existing knowledge on the reproductive physiology of camelids (especially compared to other types of livestock such as cattle or sheep). Until recently, these genetic programmes have struggled to overcome barriers such as political instability, a lack of inter-sectoral collaboration, limited investments, and few incentives (due to an uneven bifurcation of the alpaca sector between – as I explained in chapter six – three large, dominant producers based in Arequipa, and some 170,000 peasant

pastoral households that are spread throughout the Southern Andes above 4,000 masl (Postigo et al., 2008)). As Alonso Burgos – director of Pacamarca SA – pointed out, genetic programmes cannot achieve benefits within five or seven years but require long-term commitments and investments, which are rarely forthcoming due to political instability in Peru.

In an attempt to establish a long-term programme, a leading global distributor of alpaca yarn, Inca Tops, established the Pacamarca experimentation centre. Inca Tops forms part of Grupo Inca (Inca Group), a conglomerate that also includes Inca Alpaca TPX and Kuna (producers of, respectively, general and high-end finished articles made from alpaca wool), and eleven other enterprises related to agro-industry, tourism, financial services, and import-export services. The resulting high investment levels in infrastructure and expertise at Pacamarca have enabled the development of a sustained programme of genetic improvement, revolving around “state-of-the-art” techniques in animal science, such as performance recording (via the specifically developed in-house software Paco Pro) and assisted reproduction (embryo transfer and artificial insemination). Attempts to replicate this programme have come from both academia and government programmes, namely through IVITA (a collection of research centres associated with the faculty of veterinary medicine at the Universidad Nacional Mayor de San Marcos), and the national government agrarian research institute INIA (Instituto Nacional de Innovación Agraria).¹³⁴

Before exploring the effects of these relatively newly established networks of biotechnological science and expertise, I begin by elaborating some of the biological reasons why genetic improvement programmes among alpacas have proved so elusive (thereby also clarifying that the limitations outlined in the previous section are not due to some kind scientific or technical ‘backwardness’ among *alpaqueros* in the Sierra Sur). First, the biological characteristics of alpacas mean that assisted reproduction is particularly difficult, making genetic improvement a slow process. The aim of genetic improvement is to rapidly increase the number of genetically advanced males and females, thereby speeding up the process of selective breeding (usually on the basis of fibre quality, pointing to the fact that genetic “improvement” is usually defined in economic terms). There are currently seven types

¹³⁴ IVITA stands for Instituto Veterinario de Investigaciones Tropicales y de Altura.

of reproductive biotechnology being explored in relation female alpacas, and only one applied to male alpacas (artificial insemination - AI).¹³⁵

The success of these biotechnical approaches is, however, limited. Follicular dynamic synchronization (the matching of follicular growth among female donors and recipients in embryo transfer), for example, requires invasive strategies and its success is dependent upon the individual physiological characteristics of each alpaca, including shifting waves of follicular growth, which confound attempts at synchronization despite the use of hormones and ultrasound guided stimulation. Similarly, experiments with in vitro fertilization techniques that have worked for bovine species have so far failed to produce positive results. Interestingly, however, following embryo transfer, cryopreserved embryos actually result in a higher proportion of successful pregnancies than do live embryos. This result contrasts the inability to preserve male alpaca semen for AI; despite the potential for frozen semen to produce rapid advances to the genetic programmes, no live births have resulted from the insemination of previously frozen specimens (again, in contrast to other species). Francisco Franco – director of the IVITA research station in Marangani (Canchis, Cusco) – cited this barrier as one of the main causes of slow progress in genetic improvements. This biological trait also prevents the creation of a preserved or dormant form of life that can be inserted into the commodity circuit (cf. Collard & Dempsey, 2013).

Rapid genetic response is also limited by the reproduction rate of alpacas, whereby only one cria (baby alpaca) is born to each female per year (if embryo mortality is also considered, then only one offspring is expected for every two fertile females) (Morante et al., 2009). To overcome this limitation, Pacamarca initiated a programme of assisted reproduction via embryo transfer, using a selection of the best males and females. Up to six embryos were obtained from each elite female and transferred to females with high maternal abilities, resulting in an average of four annual offspring from each elite female. Data from the 2009-2010 season indicates a successful pregnancy rate of 69% and a successful birth rate of 61%

¹³⁵ Female-related practices include: follicular dynamic synchronization (aiding embryo transfer by matching waves of follicular growth with either copulation by males (female alpacas are induced ovulators) or the cycles of female donors); embryo recovery and transfer; oocyte (egg cell) recovery and in vitro maturation; in vitro fertilization (including experiments with intracytoplasmic sperm injection); nuclear transfer (cloning); and, embryo cryopreservation. For a useful review of these techniques, see Miragaya, Chaves, and Agüero (2006).

(from 101 transferred embryos) (Morante, Burgos, & Gutiérrez, 2011). Similar approaches are being taken at both the INIA and IVITA research centres, although Francisco Franco – director of IVITA Marangani – argued that embryo transfer is not yet “protocol” in Peru, partly due to the time it takes to observe the benefits of genetic improvement, and partly because “there are still several things missing in the study”. According to Franco, breeding programmes still need to overcome the persistence of both genetic and congenital diseases (the latter is acquired during foetal development and usually exists at birth, or becomes apparent within the first months of life).

There appears, then, to be resistance to the biotechnical genetic manipulation of alpacas, partly on the basis of the biological properties of alpacas themselves, but also perhaps due to the relatively recent turn of attention to these issues in South American camelids. In terms of material or bodily affect, it would be simplistic to point to an inherent and continuously active agency to the alpacas in barring human-driven biotechnological manipulation of alpaca genetics. Rather, outcomes in biotechnological and genetic programmes are a product of human-alpaca relations that have existed since human Andean populations domesticated camelids some 5,000 years ago. More than simply a socionatural performance, these relations are an active structuring of co-existence according to non-uniform intensities of inter-action. The co-evolution of alpacas and humans within Andean societies reflects a sphere of coordinated *and* uncoordinated activity, interactivity, and association, in which particular kinds of agency become apparent (Sugarman & Martin, 2011). Rather than a ‘failure of science’ or a product of ‘alpaca agency’ per se, the limited ‘progress’ in biotechnological and genetic programmes with alpacas is the outcome of inter-locking, relational agencies. Nonetheless, the difficulties encountered in genetic programmes add to the mythology of the alpaca, to the ‘wild-ness’ of these Andean spirits as terrestrial embodiments of a *yacana* always talking back to and cautioning humans.

There is, then, a re-creation of wild-ness that seems to contrast Rosemary Collard’s take on captive wild life, where she stated that “the animal’s commodity life and its wild life are in tension: the animal must be made captive – permanently encounterable or available for such intimate but controlled meetings – to be a companion commodity” (Collard, 2013, p. 154). For Peruvian alpacas, it is almost the opposite: to be a valuable commodity, alpacas must be ‘made wild’ and unencounterable in the furthest reaches of the Andes. This occurs not just through

the discursive and marketing strategies of the global alpaca industry, but as I explain below, also through the process ‘refreshing the blood’ – a reproductive process designed to overcome the defects that have emerged from centuries of in-breeding amongst families and small communities of alpaca herders.

Given the symbolic value of alpacas and the fact that, globally, Peru is the largest producer of alpaca wool, the ‘under-performance’ of genetic improvements is particularly acute. It is for these reasons that Alonso Burgos sees Pacamarca as such a unique venture, arguing that no other programme can illustrate similar advances or even produce a genetic product that is marketable. These two components – of scientific methodology and marketability – structure the Pacamarca venture:

The whole thing comes down to using scientific methods in order to improve certain aspects of the animal or the breeding activity itself, and so far, before we started this programme, nobody in the country had employed a scientific approach to all this. The scientific approach that we are employing is basically trying to obtain genetic evaluations out of the animals that we breed, so that we can be sure that these are going to be animals that can improve a certain aspect of the fibre, in our case, or of the breeding (Alonso Burgos, interview May 2013)

Alonso Burgos’ comments raise a number of important issues. First, the ‘scientific approach’ is invoked as a justification in itself, and of giving value in itself. That is, alpacas and the alpaca industry are assumed to be more valuable by virtue of scientific research into biotechnology and genetic improvement. Second, in pointing to marketable products of genetic programmes, Burgos pointed to the political economy of genetic improvement, to the need to create viable, in demand, living commodities – what Collard and Dempsey (2013, p. 2682) called “lively commodities”. This marriage of market value with alpaca genetic improvement is perhaps of little surprise, given the ways in which various neoliberal logics have been put to work on bodies of all kinds (Bakker, 2010a). Third, and as a product of the previous two points, Burgos’ comments point to the impacts of experimental centres such as Pacamarca on genetic resources in alpacas, the alpaca industry, and the many livelihoods that depend on both. In what follows, I tackle these three points together to reveal some interesting effects in the reproduction of alpacas.

Pacamarca sells its prized animals, and it does so unscrupulously according to market rules, to – as Burgos explained – “whoever wants to buy them – breeders, companies, municipalities, universities”. Yet the rationale of Pacamarca is not simply to benefit

economically by producing and selling individual, industry-leading alpacas. Neither do they seek to affect the gene pool of Andean alpacas through a piecemeal approach to distributing genetically superior animals,

We intend to make an impact by the way we are approaching the breeding and the genetic improvement of the race...It's important to note that, given our size, it's very little what we can do in terms of physically making an impact on the genetic improvement of alpacas in Peru. I mean, we produce less than a hundred animals – males mainly – that can be sold to the market per year... So the real impact that we can do, if you take the physical sense of the word, is absolutely limited (Alonso Burgos, interview May 2013).

It is the very methodology that adds value in the Pacamarca experience, thus reconceiving alpacas as lively commodities consisting of bundled techno-scientific expertise in the form of high performing genetics, as decided upon by expert analysis using data recorded in dedicated in-house software packages such as Paco Pro. Of value is the *methodology* of reinvigorating alpaca life through genetic improvement. In fact, embodied failures of the methodology to produce dramatically different or improved alpaca specimens are discarded by Pacamarca, these surpluses inserted into uncompetitive arenas of peasant alpaca farming to create a kind of bio-ecological fix:

We donate the lower quality animals that are not going to be good for us, or are not going to be good for the market. But they are still good animals to do what we call...to refresh the blood – *refrescamiento de sangre*. Mainly, the very small, poor breeders – peasants – have no means to purchase new blood for their herds. So they breed the same animals over and over, and obviously you know that if you do that, your genetic defects are just going to be multiplying. And so the animals that we do not use for studs in our own programme or are not good enough to be sold for any kind of money to the market, then we just give them away. We give them away to the very small breeders as refreshers of blood *just* so they can combat and avoid any major genetic defects (Alonso Burgos, interview May 2013, emphasis added).

Two processes are at work here: first, Pacamarca is ensuring that value is placed in their most prized, live specimens, which carry the Pacamarca brand of reinvigorated alpaca life. At the same time, donating lesser quality, but well-bred (not inbred) animals helps to dispose of surplus genetic resources – of those genetics not deemed valuable enough to sell on the market as prized breeding specimens. While this process devalues the genetic attributes of these alpacas – which are an embodied outcome of the relations between the bio-genetic traits of the alpacas themselves and of the labour of human scientists – it also upholds the second process of eradicating what industry considers the almost worthless genetic traits of alpacas herded

according to the traditional techniques of rural peasants. Donating these valuable, but far from prized alpaca specimens, in order to ‘refresh the blood’ of peasant herds, helps to prevent the further deterioration of alpaca genetic resources while maintaining the value of Pacamarca’s most coveted genetic outputs. The notion that these donations are “*just*” for combatting genetic defects implies that they are not designed to enhance the economic competitiveness of *alpaqueros*; rather, the aim is to ensure that available gene pools remain clean. Pacamarca therefore maintains its high-end product, while helping to reinvigorate the alpaca sector generally by contributing to higher standards (and by extension, higher demand and higher prices, thereby re-absorbing the previously externalized surpluses of alpaca genetic value). This alpaca as a lively commodity – the live, genetically enhanced alpaca used for improved production – is reproduced through the seemingly contradictory process of discarding the less-than-optimal specimens, which serve to breathe new life (however, incrementally) into the potentially inbred gene pools of *campesino* alpaca herds.

While I have so far conceived the bio-ecological fix in political-economic terms, the dual process that it entails also evokes the symbolic elements of reproducing alpacas, including the Inka sacrificial ceremonies and the symbolic sacrificial practice of *t’inkay* that is promoted today. That is, some alpacas are offered or sacrificed for the benefit of the greater good of the alpaca population; though not sacrificially killed, they are sacrificially de-valued in order to refresh alpaca gene pools from the “bottom-up”. This parallel raises doubts as to the purely economic motive of alpaca breeding and production. Part of the success of Pacamarca is measured in terms of the replication of their methodologies by other experimental stations in the private and public sector (such as Mitchell Group, a rival conglomerate within the alpaca industry, and INIA, respectively). This *methodological* replication is used as a measure of the impact of Pacamarca over and above the selling or redistribution of genetically improved sires; Pacamarca sees itself as having brought the scientific methodology to alpaca breeding programmes in Peru. According to Alan Cruz (operations manager of Pacamarca), however, and acknowledged by representatives of INIA, replication rarely exceeds fifty per cent of the processes, practices, and techniques on display at Pacamarca. The difference often lies in investment levels, and the effect is striking in terms of the quality of infrastructure provided for the genetic programmes (see **Figure 26** and **Figure 27**). This divergence in investment levels has an impact on the kinds of work that can be undertaken and the levels of success that are

likely to be achieved. Although IVITA was established in 1961 and INIA's Puno-based livestock research institutes in 1975, centres like Pacamarca have helped to re-focus attention in Peru on preserving and enhancing alpacas. It was not until 2008 that INIA released its own techniques of controlled breeding for improved fibre quality, and it took until 2011 for the same organization to make public their process of embryo transfer.

So far, it is possible to conceptualize the above characteristics of these genetic programmes within the broad terms of the commodification of nature, and particularly concerning the privatization, real subsumption, bio-ecological fixation, and alienation of alpacas as both a primary commodity and affective body.¹³⁶ Pacamarca, for example, is engaged in a privately-funded programme of attempting to develop new strains of biotechnologically produced alpacas (real subsumption) capable of producing finer and yet more robust qualities of wool. While they offer some of the side-benefits of this programme to *alpaqueros* (thereby producing a bio-ecological fix to the over-accumulation of capital in the alpaca sector, and to the ailing quality of alpaca genetics in the Sierra Sur), the best results are transformed into the high-end commodities of Inca Tops. These commodities are distinguished from competitors by virtue of the results of the breeding programme at Pacamarca. The benefits of these genetic improvements therefore largely remain in private(ized) hands. Finally, *alpaqueros* appear to be getting more distant (and alienated) from their herds, as breeding sires are produced in far-off laboratories and inserted into the production chain. In what follows, I pick apart this lens by addressing the notion of 'lively commodities' (Collard & Dempsey, 2013), and linking it to the emergence of a 'vital economy' of alpaca reproduction in the Andes.

¹³⁶ See Bakker (2010a) for a framework of 'neoliberal natures' in which these processes operate.



Figure 26 Mechanized agriculture at Pacamarca – a relatively rare site in the Sierra Sur



Figure 27 Dilapidated, ghostly infrastructure at IVITA La Raya, a solitary vicuña in the right foreground

Disembodied commodities: neither ‘lively’ nor (un)dead

No commodity is really dead, of course, despite Collard & Dempsey’s (2013) depiction of lifeless animal-derived commodities. For Marx (1867), all commodities are a congealment of (human) labour, and for Haraway (2008), *human* labour is only part of the story of lively capital. We might presume, then, that nonhuman animal-derived commodities are still a congealment of human and nonhuman labour, however brutalized that labour may appear in its un-living state. If a commodified live animal is already an “undead but always generative commodity” (Haraway, 2008, p. 45), what is a dead animal-derived commodity, given that it continues to be a congealment of human *and* nonhuman labour? In this section, I point to the fact that alpaca-related products carry through some of the live-ness of Collard & Dempsey’s (2013) formulation of commodities, even as they appear un-living. Wool, for example, embodies the wild-ness of alpacas, in the sense that its value relies on the healthiness of the alpacas, not just at the time of shearing but for the animal’s life up to this point – the particular live-ness of the alpaca in its early years is an important factor in determining the eventual commodity value of the sheared wool.

At the same time, the raising of alpacas to ensure this live-ness, healthiness, and ultimate wooliness, contributes to discussions around what Collard & Dempsey describe as hierarchies between humans and nonhuman beings, which underpin the value of lively commodities and cast nonhumans as disposable. In contrast, alpaca wool – as a differentiated commodity, depending at which part of the commodity circuitry one looks – casts alpacas as *in*-disposable. As I explain in what follows, even as new bio-technological processes are explored to improve the qualities of wool, thereby enhancing its value as a commodity, so the very live-ness of the alpaca is revitalized through improved animal health and nutrition, and ultimately reinvigorated gene pools. I later illustrate how this bio-commodified circuit of ‘vital’ capital has affected the rearing and breeding of alpacas for wool.¹³⁷

The primary objective of experimentation with alpaca genetics has been to investigate improvements to alpaca fibre, usually with the purpose of enhancing its economic value. Given that fibre diameter is considered the main selection objective in alpaca populations

¹³⁷ For an account of circuits of capital in general, see one of Harvey’s (1982, 2001, 2003) treatments.

throughout the world, ‘improved’ genetics are measured in economic terms according to the increased revenues that can be derived from finer alpaca fibre (that with a small diameter). There are six diameter-determined categories of alpaca fibre, each of which are associated with a market price: royal alpaca (<20µm, US\$50/kg); baby alpaca (20.1-22.5µm, \$22/kg); superfine (22.6-24.0µm, \$15/kg); fine (24.1-26.6µm, \$10/kg); medium (26.6-30.5µm, \$4/kg); and thick (>30.5µm, \$1/kg).¹³⁸ Breeding programmes have explored the genetic variation of fibre diameter and fibre growth patterns (in terms of variability and linearity) (Gutiérrez, Goyache, Burgos, & Cervantes, 2009). While results have been inconclusive (Frank et al., 2006), breeding programmes continue to be promoted (Wurzinger et al., 2006), and the results that emerged from Pacamarca suggested that fibre diameter could be positively affected by a long-term breeding programme (Gutiérrez et al., 2009). Utilizing their custom software, Paco Pro, data on fibre traits is recorded at Pacamarca for each alpaca, using subjective scores from 1 (poor) to 5 (excellent), which are assigned by “expert classifiers” (Morante et al., 2011; Morante et al., 2009, p. 39). These studies revealed that the environmental variance of fibre quality is likely to be largely under genetic control, and that a “growth model” indicates a similarly strong genetic correlation between fibre diameter at birth and fibre growth over the course of animal life (Gutiérrez et al., 2011).¹³⁹ Alpaca wool therefore carries a degree of liveliness even in its ultimately sheared, disembodied form: its commodity value is directly tied to the living genetics that produce its refined qualities.

However, the general inconclusiveness of these studies (in proving correlations rather than causalities) means that for the now there are other, easier ways to improve the quality of alpaca fibres. First, animal health and nutrition is considered a precursor to any meaningful genetic programme; as Francisco Franco put it, the two go hand-in-hand. It is important to focus on nutrition during the final trimester of gestation, when the young alpaca develops the

¹³⁸ This practice of purchasing fibre according to quality (fineness) rather than weight began circa 1991. Nonetheless, there is a degree of variability in the fibre diameters attributed to each category; the quoted categories and corresponding prices are based on interviews with Pacamarca staff (who are institutionally connected to, but do not necessarily reflect the interests and opinions of large industrial buyers), and therefore depict prevailing Peruvian market conditions as of 2013.

¹³⁹ The growth of fibre during the lifespan of an animal is important because the alpaca industry expects a low degree of variability between shears; i.e. animals with a small degree of variation in fibre diameter during their lifespan are preferred over those with a large degree of variation (Cervantes et al., 2010).

secondary follicles that will remain with it for the first three months of its life and which will partially determine the quality of the fibre. The liveliness embodied in the eventual commodity of alpaca wool is therefore a complex congealment of multiple forms of human and nonhuman labour, exerted throughout an alpaca's life, even before it has been born. This fundamental link between nutrition and eventual wool quality led Pacamarca to adopt a semi-industrialized model of producing animal feed: "We're not scientists in that sense...we're just entrepreneurs who have a very practical approach to breeding. One of the approaches that we have taken is that since everybody deals with natural pastures and improving pastures... we took a different approach: we seeded foodstuff for animals and we feed them" (Alonso Burgos interview, May 2013). Burgos therefore regards the logical, entrepreneurial approach of investing in food production as fundamental; incremental improvements to natural pastures (such as those promoted by Soluciones Prácticas and the IPEBA modules) are deemed insufficient. Instead of feeding alpacas rotationally on natural pastures, at Pacamarca they grow cereals (mostly oats) that are processed into alpaca feed – an approach that Burgos argues is available to *alpaqueros* if they chose to explore it (given that oats do grow at high altitudes and are a relatively low-cost investment).

The introduction of treatments and supplements for animal health comes later: "that's a second step after you have secured the production of feed for the animals, and made sure they are feeding properly. All the parasitics and medication comes after" (Alan Cruz interview, June 2013). Experts at Peru's national agrarian university (Universidad Nacional Agraria La Molina) support this approach, including Ivonne Salazaar (professor in the department of nutrition, within the faculty of Zoology), who argued that declines in livestock production derive largely from poor animal nutrition. For Salazaar, these health issues are best dealt with through what she calls comprehensive management, whereby any medicinal or chemical inputs are preceded by appropriate management techniques (such as rotational grazing, animal separation, etc.). Nonetheless, animal health is still a concern for scientists at both IVITA and INIA, who are researching the effects of different vaccines. The diseases targeted include: *enterotoxemia* (which causes roughly 80 per cent of cria deaths); *sarcocystosis* (a protozoan that develops in the muscles of the alpaca and yet remains dormant for years, only later causing defects and a deterioration of the meat); and *Fasciola hepatica* (which is commonly known as sheep liver fluke and results in under-weight, malnourished animals).

In addition to securing healthy animals, there are some basic methodical steps that can be taken in the post-processing of alpaca fibres, in order to prevent damage and to effectively separate and package the fibres of different qualities in order to obtain the highest possible price per kilogram. All of the three aforementioned major experimentation centres (Pacomarca, IVITA, and INIA) place emphasis on post-processing (as do the functional fulfillments in IPEBA's modules for expert camelid herders), and all three advocate more or less the same "improved" shearing technique. It is Pacamarca, however, that has invoked the pre-Hispanic historical imaginary of Andean production by calling their approach the "Inca shearing" (*Inca esquila*) technique. This orderly, methodical technique of shearing and sorting – of separating the coarse and fine fibres – facilitates fast classification of the fleece and saves costs in terms of human and technological resources. The process has been clearly defined by Pacamarca according to eleven steps, ranging from cleaning the shearing area and the animal, through appropriate handling of the animal and effective shearing techniques, to post-processing methods such as cleaning, folding, drum-wrapping, and bagging the separate types of fibre (e.g. skirts, neck, fleece). Similar methods are promoted by IVITA, where it is referred to as the split-shear technique. These methods produce a better yield of finer fibre qualities such as royal alpaca and baby alpaca, which are more easily separated during classifying processes and create a better return for the alpaca producers (Morante et al., 2011; Morante et al., 2009).

While the approach may be technical, it does not require advanced technologies, and by invoking the Inka, Pacamarca's choice of name reflects a discursive attempt to maintain the alpaca as a symbol of the Andes. This naming fits within and contributes to romanticizations of Inka technological sophistication, despite the fact that the Inka relied upon and appropriated many institutional and technological forms from the Andean societies that they colonized (Rostworowski & Morris, 1999). The term "Inca shearing" invokes the technologically, technical, and methodical processes associated with the assumed good governance of regional production and economic integration under the Inka. By placing emphasis on maximizing the economic returns that can be derived from alpaca production, contemporary alpaca research stations reinforce this sound, rational economic practice.

Entrepreneurialism therefore resurfaces as an ordering mechanism in the reproduction of alpacas and alpaca-related resources, and has been institutionalized in the national competition introduced by Inca Tops and Pacamarca, known as the "Inca's Quintal". A *quintal* equates to

approximately 46 kilograms and represents the weight of roughly twenty-two or twenty-three complete alpaca fleeces from animals of about one year old. This unit was used widely by the Inka and continues to be applied in the trading of natural fibres on the Peruvian market. The “Inca’s Quintal” is a competition open to all Peruvian alpaca producers, who enter their best fibres for the chance to receive prizes including cash, shearing and animal management tools, and prized breeding specimens from Pacamarca. The winners are selected by grading the fleeces according to the fineness of the fibre (diameter), weight, purity of colour, the absence of guard hairs, and fibre strength. As the following section explores, however, while these competitions are designed to invigorate production and entrepreneurialism, they are neither the product of the private sector solely, nor a purely contemporary, neoliberal phenomenon.

Intimate disconnections

As part of Soluciones Prácticas’ Proyecto Paqocha, *kamayoq* spent a week at IVITA-Marangani to learn about alpaca science and to develop their repertoire of practical skills in raising and maintaining alpaca herds. Yet this training appears to have lacked depth, reflecting a symbolic rather than substantive commitment to reinvigorating intimate knowledge of alpacas among the *kamayoq*. Francisco Franco argued that, in addition to a minimum number of hours being required for the assessment of *kamayoq* in their own fields, they also require a more comprehensive and embedded form of training over the course of multiple years (e.g. a minimum of three years). In his opinion (which he stressed is not necessarily the official position of IVITA), *kamayoq* training should not be a ready-made package – such as that provided by Soluciones Prácticas – consisting of a maximum of two weeks of learning at institutes such as IVITA (often this component is not included at all). This short-term commitment – which has been in place for many of the seventeen rounds of *kamayoq* promotion undertaken by *Escuela Kamayoq* – reflects a rather symbolic gesture of exposing *kamayoq* to alpaca science, rather than embedding them in continuous, grounded education on alpaca (re)production.

As Soluciones Prácticas staff pointed out, *kamayoq* cannot be expected to replicate procedures such as embryo transfer, with its high costs and relatively complicated technology for field implementation. Nonetheless, for Franco, only through participation in long-term,

integrated educational programmes can *kamayoq* be considered technical extensionists with the level of knowledge and skills required to take on the task of delivering the kinds of results that organizations like Soluciones Prácticas are expecting (that is, more-or-less to undertake the task that trained agricultural technicians, veterinarians, and engineers currently do). Likewise, this continuous, integrated education is required if *kamayoq* are to represent municipalities, breeding associations, or large producer associations, as is the stipulated goal both for Proyecto Paqocha and for rolling out the national plan to formally certify *kamayoq* via the government institute IPEBA (see chapter five).

The kinds of long-term, integrated programmes that Franco described are also in-demand amongst the *kamayoq* themselves, suggesting that for some *kamayoq* basic technical training is insufficient. Pablo Curi Huami – leader of a producer’s association and former mayor of the community of Quilcaccasa (San Miguel de Mestizas) in Apurímac – explicitly pointed to the lack of intimate knowledge of alpacas among some technicians, and to the potential benefits of collaborative ventures for alpaca breeding and genetic improvement:

In previous years, technicians have come to work with us but really they did not know the alpacas; they only asked us “how do you work? How do you do the mating?” So we wondered if they were trained, if they knew genetic improvement, breeding, and if they knew nothing more than us and only come to ask instead of enabling us, rather than explaining to us. We do not want those people, but we want good technicians who know alpacas, like most professionals and technicians that come from the Puno highlands and the University of La Raya [IVITA-La Raya]. These guys have lived since childhood with alpacas, and they want to come with *Soluciones Prácticas* so that we have good technicians who really know the subject of alpacas.

The notion of living with alpacas therefore emerges as a qualifying factor for effective knowledge and the training of alpaca husbandry, making the two-week visit of *kamayoq* to IVITA insufficient for developing a comprehensive, long-term plan. Living with alpacas for a lifetime is deemed necessary for external actors to be experts of alpaca reproduction, suggesting that alpacas also shape the knowledge produced in the process.

Nonetheless, the two-week training visit to IVITA is better than the lack of engagement of the *kamayoq* with other institutes such as Pacamarca and INIA, which reflects the broader strains on inter-sectoral collaboration in the field of alpaca production and reproduction. These strains include: the neoliberal, entrepreneurial emphasis of Pacamarca’s “trickle-down” approach to knowledge distribution (such as through the Inka’s Quintal competitions); a sense

of ownership of the concept of the *kamayoq* within *Soluciones Prácticas* that has alienated IVITA; and the reluctance of INIA to extend into regions such as Apurímac (despite the fact that they collaborate with *Soluciones Prácticas* in the northern department of Cajamarca). Similarly, the *ad hoc* approach to co-ordination by government bodies such as the Ministry of Agriculture, and the general supply and demand rhetoric that underpins much of the work of improving agricultural knowledge and practice, undermines coordinated efforts at collaboration (see chapter five).

Alonso Burgos, in his typically bullish tone, summarized what he sees as the incompatibility of these sectors when it comes to working on genetic improvement programmes, arguing that other institutions “are absolutely incompetent; nobody out there, neither in the government nor in the NGOs, have a very clear professional view of what genetic improvement is all about”. Moreover, knowledge mobilization and distribution, he argued, is useless without an appropriate economic motive to ensure that alpaca herders change their practices and enhance productivity. Thus, Pacamarca simply puts its technologies and methodologies on display (thus mirroring the shift to static forms of knowledge amongst the *kamayoq* explored in chapter four), and expects those who visit the site to go away and replicate their approach, with the ultimate goal that productive improvements will trickle down to rural alpaca herders. An active programme of collaboration across sectors in order to distribute productive knowledge is a proposition that Burgos rejected outright.

If such a programme of multi-sector collaboration were to be implemented, the essential components are deemed to be personal validation, strategic knowledge, organizational commitment, and public validation (Abel & Gillespie, 2014). There are, therefore, significant barriers to the kinds of collaboration that can link *kamayoq* effectively to the kinds of knowledge and expertise on alpaca reproduction that is deemed necessary to preserve alpaca production either as a sustainable sector of the Peruvian economy or as a viable rural livelihood. Given these difficulties, precisely how does *Soluciones Prácticas* affect human-alpaca relations via the *kamayoq*; what kinds of knowledge and expertise are being channelled through the transnational networks of *Soluciones Prácticas* to the everyday practices of the *kamayoq* and the lives of the alpacas?

Carlos de la Torre – who worked with *kamayoq* for over three decades – stipulated that the goal of Proyecto Paqocha was to improve the quality of alpaca production in Apurímac to

a degree comparable with other regions in the Sierra Sur, particularly Puno. While de la Torre tied the problems in Apurímac to the weak institutional and governmental context, he listed the key areas of focus as enhancing food supply, pastures, and animal health, and improving the long-term quality of animals by reducing in-breeding and the associated reproduction of genetic defects. To achieve the latter, de la Torre recognized the need to introduce sires from external sources, in order to “take care of the line of production”. While this mirrors the biotechnological rationale of experimentation centres such as Pacamarca, IVITA, and INIA, the “prize” sires introduced via Proyecto Paqocha are simply purchased on the market, rather than sourced through breeding centres that can validate and approve the breeding potential of the animals.

This policy of introducing sires from external sources has implications for the Food and Agriculture Organization’s (FAO) goal of preserving alpaca genetic resources via traditional breeding institutions such as the *kamayoq*. These external sires are bred largely for the economic benefits of improved fibre, as made clear by the work undertaken by Pacamarca. For the FAO, equally important are the “survival” characteristics of breeds, such as the ability to cope with particular diseases. Pastoralists should therefore be encouraged to continue maintaining animals that possess these traits, which may be of no current economic value but are of potential value under changed environmental and economic conditions (Food and Agriculture Organization, 2009). Yet the efficacy of the FAO’s approach to pastoralism in the Andes is questionable, given that previous endeavours such as project PASA and the related PROALPACA (both of which operated according to the Pro-Poor Livestock Policy Initiative), failed to have any notable impact on alpaca production in departments such as Apurímac (Fairfield, 2006; Carlos de la Torre, 2011 interview).¹⁴⁰

Nonetheless, *kamayoq* testified to the quality of the animals that were introduced to their herds, agreeing that their offspring have proved more resistant to diseases and better able to provide finer qualities of fibre. This corroborates evidence that material livelihood benefits (including improved wool and meat products) derive from genetic programmes and the introduction of western health science and pharmaceuticals (Cristofanelli, Antonini, Torres,

¹⁴⁰ Unfortunately, representatives from FAO in Peru opted not to participate in my research; here, therefore, I have drawn on secondary data.

Polidori, & Renieri, 2004; Morante et al., 2011; Morante et al., 2009; Quispe, Paúcar, Poma, Flores, & Alfonso, 2011). However, Ernesto Ccana Callo – co-ordinator of Proyecto Paqocha – acknowledged that the quality of alpacas in Apurímac is still far from comparable to Puno or Cusco. This fact is indicated by the price that producers in Apurímac are obtaining for their live alpacas, which is well below the market average for breeding specimens at 60-120 Peruvian nuevo soles (c. US\$21-42). Consequently, no experts in the alpaca industry – whether from NGOs, academia, or private breeding centres – hold much hope for *alpaqueros* in Apurímac to make a viable livelihood out of selling sires for reproduction. This pessimism suggests that for the foreseeable future, influences on alpaca populations are unlikely to come from endogenous sources; even breeding centres in highly productive areas such as Puno are predicated to struggle in the face of increasing competition from Australia, the USA, Chile, and Argentina.

The poor genetic quality of the alpacas was also attributed as the cause of the poor quality of wool being sold by *alpaqueros* in Apurímac. On average, nearly 40 per cent (82 kilograms) of wool being sold by *alpaqueros* was of the poorest quality ('thick'); 21 per cent (43 kg) was fine; 17 per cent (36 kg) superfine; 15 per cent (32 kg) baby; and just 7 per cent (15 kg) was of the finest quality known as royal alpaca. Moreover, the price obtained for these qualities of fibre is far below the industry standards, ranging from just US\$6.40 per kilogram of royal alpaca to US\$3.41 per kilogram of medium alpaca fibre.¹⁴¹ These low prices were attributed to the distance of *alpaqueros* from markets, the low volumes of fibre being sold, and the lack of associated production in the region. (As I explained in the previous chapter, however, socio-economic strategies such as associated production and collective commercialization struggle with limitations of their own.)

The basic benefits that emerge from early stages of genetic improvement are therefore just the foundational elements upon which a longer-term programme of improvement can be based. In capacity-building workshops, Soluciones Prácticas staff emphasized that the initial stages of Proyecto Paqocha would be dedicated to providing formal certification of *kamayoq* skills in the theme of reproducing good quality sires in order to improve the quality of herds in

¹⁴¹ The data presented here is derived from triangulations between interviews with *Proyecto Paqocha* staff, observation of project meetings, and the *Soluciones Prácticas* internal baseline study for the project.

Apurímac. The certification of skills in managing animal health and nutrition, and deploying improved shearing techniques would come in subsequent project phases; training in these skills, however, was initiated from the outset. *Kamayoyq* are therefore trained in a similar shearing technique to that promoted by Pacamarca, involving appropriate handling of the animal, the use of appropriate shearing utensils, and effective cleaning and processing of the sheared fibre (see appendix 4). These techniques are distributed by practical demonstration and are institutionalized as indicators in the national system of certification. The process of shearing therefore becomes a rationalized, routine component in the process of raising alpacas. Of decreasing importance are the symbolic ritualized components such as *ama puskana*, and of increasing importance is the ability of *kamayoyq* to communicate a replicable technique for shearing, with the aim of producing an output that closely matches the expectations of a distant, relatively untouchable alpaca industry. Many *kamayoyq* do not see the ultimate impact that the application of these techniques has on the final retail garments. Even the *kamayoyq* involved with weaver's associations remain detached from the shift in the appeal of the final commodity on global markets, despite recognizing the immediate improvements that shearing techniques can have upon alpaca yarn. (There is therefore an added dimension to alienation here.) Nonetheless, given its specific replicable design, these shearing techniques are well received by *kamayoyq*, and were usually among the first elements cited when they were asked about *kamayoyq* training. For improved shearing techniques to enhance value, however, the wool itself must also be of a higher quality. Herein lies an interesting idiosyncrasy to the knowledge extension networks of the *kamayoyq* – one that has left Frank Sinatra haunting the livelihoods of rural alpaca herders.

The white ghost (or the haunting of Frank Sinatra)

In order for changes to shearing techniques to have a significant impact on livelihoods, *kamayoyq* are encouraged to promote particular kinds of alpacas with certain fibre characteristics. This link reproduces a distortion in alpaca (re)production in the Andes, which revolves around a series of bio-economic myths about alpacas and their wool. The economic component to the myth relates to the continued practice of promoting alpaca selection in order to produce only white-coated alpacas, under the assumption that white fibre is of greater value

to the alpaca industry. It is true that, at some point (prior to the 1980s) in the relatively recent development of the globalized alpaca industry, white wool was favoured and therefore demanded a higher price. Today, however, wool quality (fibre diameter) is the determining price factor, particularly if the alpaca has a *uniform* colour. There are sixteen colour classifications in total, each of which can obtain the same price per kilogram according to the fibre diameter, assuming the colour is uniform. There has, however, been a general whitening of alpaca herds, which began in the 1950s, when approximately twenty-four per cent of alpacas were of white and light fawn (LF) colours, and the remaining seventy-six per cent consisted of the various eleven different tones of brown, grey, and black alpacas. By the end of the 1960s the proportions had more than reversed to eighty per cent white alpacas, and twenty per cent coloured (including the LFs).

The epicentre of this shift was far from the daily reality of Andean *alpaqueros*, lying instead on Hollywood golf courses at the height of the ring-a-ding-ding era of the early 1960s. As the columnist Barry Salberg put it, this was “the era of alpaca cardigans, big-fin Cadillac convertibles, and custom-made persimmon woods”. The likes of Bob Hope, Bing Crosby, and Frank Sinatra adorned their favourite alpaca wool sweaters and cardigans, beginning an on-course craze. Sinatra was at the peak of his fame, frequently appearing on golf courses and in Hollywood films wearing one of the sweaters that helped him accrue an annual alpaca knitwear bill of approximately US \$30,000 (equivalent to more than \$250,000 today). Sinatra preferred his knitwear in vibrant tones such as orange, pink, and blue; but this parallel with the legend of plucking multi-coloured fibres from an apparition of the *Yacana* is ironic (see the sub-section on ‘cultural-symbolic reproduction’ in this chapter). Sinatra’s multi-coloured fibres would not bestow productivity upon Andean herds – as the multi-coloured *Yacana* would – but rather would transform the make-up of these herds for generations to come.

As demand soared in the early 1960s for these brightly coloured, knitted alpaca-wool products, a group of North American textile companies – many operating in the textile centre of Boston – began to import white alpaca fibre in unprecedented quantities. This demand for white wool affected supply networks in Peru, where the three industry leaders of today were just beginning to make their mark in Arequipa. Ultimately, with intermediaries purchasing large quantities of white alpaca wool, it became apparent to rural *alpaqueros* that producing white alpaca fibre was more viable and more profitable than producing any coloured variant.

In the space of approximately two decades, the entire production complex had changed, and the white alpaca assumed a hegemonic position within the production chain – a position that it largely retains today, despite the fact that the quality of fibre – measured according to diameter – is the major determining factor in the price per kilogram.

This economic myth has been compounded by some of the biological traits of alpacas, which are equally tied to a series of biological myths.¹⁴² There exists the perception that some sires possess strong black genes, implying that somehow the animal's black genes are able to overcome any other genes. However, genes are either dominant or recessive, and black is the latter. For an alpaca to be born with a black coat, both of the parent alpacas must possess black genes (these can be masked by a dominant white gene). There are two implications of this trait. First, breeding homozygous animals (i.e. two animals, where both have two genes of the same colour, such as WW and bb), will always result in white offspring (Wb) since white is the dominant gene. While this trait *appears* to ease the reproduction of white alpacas (thereby catalyzing the process instigated by the Sinatra-inspired economic shift), the offspring of these homozygous animals will always be heterozygous (Wb), meaning that when they breed they possess a fifty per cent chance of throwing a black gene back into the reproductive process. Second, therefore, just because an alpaca with white wool is born to a white parent, it does not mean that subsequent offspring cannot have black wool. Of course, breeding two white homozygous (WW) alpacas will result in an offspring of the same; but as all three of the alpaca research stations confirmed, identifying these animals is difficult and requires considerable investments of time (across generations) as well as procedural dedication in breeding – neither of which are likely to be high amongst the priorities of rural alpaca herders.

Linked to these traits and myths of colour selection is the misperception that male genes are more important than female genes in determining coat colour, leading to the mistaken assumption that the practice of using white breeding males will produce white alpacas. It is

¹⁴² While I refer to a series of myths in this section, these myths do have an effect on market relations. The consumption choices of the likes of Frank Sinatra ultimately fed back into the alpaca sector in Peru, reflecting the unintended consequences of consumer choices and consumption politics. Similarly the biological myths have affected NGO and government programmes of knowledge extension in Peru. The 'whist ghost' therefore reflects the ways in which these myths extend beyond their reach to continue having an effect beyond their origins or immediate occurrence, in this case to perpetuate the drive towards breeding white alpacas – which were, but are no longer, more lucrative for breeders and herders.

extremely difficult, then, for alpaca herders to accurately carry out a systematic programme of breeding white alpacas.¹⁴³ For these *alpaqueros*, the corollary to the biological traits and misconceptions is that an apparent whitening of the herd can appear relatively easy in one year, only to be followed in the next year by a substantial increase in non-white alpacas. The (false) economic incentive and continued promotion of reproducing white alpacas therefore places unwarranted strain on the livelihoods of *alpaqueros*; it also undermines and detracts from the training of *kamayoq*, as they attempt to wrestle with the notion of colour selection for no good reason (this is not to say that they should not select alpacas according to uniform colours). Interestingly, this issue remains unclear in the training of *kamayoq*: while emphasis is placed on fibre quality, *kamayoq* are also encouraged to focus on breeding white alpacas. But after we had chased his young alpacas around the corral and doused them in diazinon, *kamayoq* Pablo spoke articulately about the importance of uniform coat colours, rather than the colour itself. Given that Soluciones Prácticas continues to promote the misinformation about white alpacas, the question arises as to where Pablo gained his wisdom – perhaps from that two-week visit to IVITA earlier in his *kamayoq* training. I regret not asking this question directly.

Finally, the theme of training *kamayoq* in animal health also carries with it some idiosyncrasies. The issue of parasites and other gastrointestinal diseases that affect the nutrition of alpacas was among the themes most discussed by *kamayoq*, both in relation to their training to-date and their needs and demands for future capacity-building. Yet despite also being a focal point of current and previous capacity-building initiatives by Soluciones Prácticas, the messages appear to be mixed. Rhetorically, the staff and publications of Soluciones Prácticas continue to promote the virtues of traditional and natural medicines (e.g. Hellin et al., 2005; Hellin & Dixon, 2008), and while the promotion of traditional medicines to treat diseases such as *Fasciola hepatica* (sheep liver fluke) may exist within some realms of *kamayoq* training, this appears to contrast the reality of the younger generations of *kamayoq*. Many *kamayoq* voiced a distrust of the herbal treatment of garlic and artichoke, based on a lack of efficacy, the prohibitively long period of treatment before any improvements are observed, and the lack of availability of some ingredients (such as naturally occurring weeds).

¹⁴³ (for a more in-depth discussion of these myths see Merriweather & Merriweather, 2003).

Interviews and focus groups with *kamayoq* therefore pointed to a demand for improved accessibility to affordable yet effective treatments, with many *kamayoq* voicing a preference for synthetic rather than natural products.¹⁴⁴ Consequently, *kamayoq* practice increasingly includes the use of a variety of disease control techniques and nutritional supplements. The combination of medications and supplements used by *kamayoq* include ivermectina (for scabies), alvarrisol (an anti-parasitic), diazinon (an insecticide and anti-parasitic), desparasiarte and vicho (vitamins to help in de-worming processes), iodine (to treat wounds and lesions left by parasites), and optalmen (an eye treatment). Despite Soluciones Prácticas rhetoric, the use of these products by the *kamayoq* is – at least in part – a product of the NGO’s capacity building, as they train *kamayoq* in the appropriate administration and dosage of various treatments. Julio – a recently trained *kamayoq* in Apurímac – proudly illustrated his training in medications and supplements by describing the purpose and effective administration of each of his available medications. Similarly, in Cusco I was frequently asked to hold tight the head of cattle, as a *kamayoq* would inject a periodic dose of antibiotics and nutritional supplements, with a forceful swing of the arm ensuring that the needle penetrated the tough skin and flesh. Observation of peer-to-peer knowledge exchange also revealed that many *kamayoq* focus on the practical demonstration of administering treatments, perhaps due to the replicable nature of the techniques involved.

While the introduction of these techniques clearly does not reflect “traditional” animal husbandry, it has helped to maintain alpacas as a healthy resource thereby strengthening alpaca farming as a sustainable and viable livelihood option. Many of these nutritional and veterinary products, however, are produced in Lima by large pharmaceutical corporations and distributed throughout South America, thus connecting alpaca health and vitality to a network of pharmaceutical science – an extension of the new technonatural *yacana*. Rarely are these products linked to local, traditional, or natural remedies and supplements to provide an integrated approach – a contradiction noted by some of the older generations of *kamayoq* who conceive themselves as partly responsible for reclaiming that natural, sustainable, and traditional agricultural methods (see chapter four).

¹⁴⁴ The treatment of alpacas with chemical remedies has also arisen in response to the inter-species flow of parasites and harmful bacteria (often from dogs).

Conclusion

I opened the chapter by returning to some of the historically constituted cultural-symbolic links between the *kamayoq* and alpacas, pointing to their historic role in the Andean animist mythology of the *Yacana* and the contemporary form of cultural practice being re-emphasized through a revival of the Andean calendar. I ended the chapter by illustrating the links between the *kamayoq* and a new technonatural *yacana* of bio-technological reproduction and advanced scientific techniques in animal health and nutrition. I conducted a political-economy inflected political-ecological (and somewhat political ontological) analysis of the connected world of: the genetic traits of alpacas; Andean *alpaqueros*; networks of knowledge and expertise; the role of alpacas (and their genetics) in Andean living worlds; the contemporary globalized alpaca sector; and, the alpaca experimentation centres that have taken as their task the ‘re-wilding’ of alpaca genetics and the revival of the alpaca sector as a whole. Elucidating these connections took the narrative from the pre-Hispanic rituals of bringing species vitality to alpacas, to the bio-technological and genetic research being conducted today in order to ‘refresh the blood’ of what has been characterized as an alpaca population ailing from generations of in-breeding. The *kamayoq* continue to link these components as they simultaneously reproduce Andean forms of animal husbandry that draw energy from sentient entities, and connect *alpaqueros* (albeit somewhat sporadically) to circuits of scientific expertise and bio-technological techniques of reproduction and animal health.

Alpacas and *kamayoq* are therefore inserted into an everyday politics that wrestles with different ontologies. *Kamayoq* build on historical connections to alpacas and the rest of an Andean living world, and they work to revive the significance of being in and animating in this world. Yet through their networks with NGOs and alpaca research stations, they also connect to forms of techno-science that appear quintessentially Western (given definitions offered by Eduardo Grillo and Grimaldo Rengifo). I have argued, however, that a degree of everyday positionality in practice allows *kamayoq* to function in both worlds, without necessarily compromising the integrity of either. Grillo and Rengifo would perhaps disagree, arguing that the genetic programmes being conducted at places like Pacamarca impose Western notions of economic value and productivity upon the Andean living world. Yet these programmes do not detract from the intimacy of human-alpaca relations in the Andes – what is

more intimate than learning the intricacies of artificial insemination (in an emotive, relational sense as well as a material sense)? Moreover, the notion of vitality is carried through both worlds: the vitality that upholds the Andean living world is also the driving force of biological and genetic experimentation. One of the main differences, however, is the end goal, which for alpaca genetic experimentation centres is often economic (though not necessarily always, as in the case of IVITA).

I therefore argue that the complex networks underpinning alpaca reproduction constitute a kind of ‘vital economy’ of alpaca reproduction. First, alpacas are ‘vital’ to the Peruvian economy, both in the sense of a long-term historical constitution of an alpaca economy and in the sense of today’s combined economy of globalized-capitalist and agrarian production. However, the term also refers to the ‘vitality’ of the alpaca sector – also historically constituted and reproduced under contemporary political-economic structures. Historic Andean understandings on alpaca vitality are somewhat reconcilable with contemporary genetic science. In pre-Inka societies, technological approaches to livestock reproduction existed alongside socio-mythological components (as explored in chapter three). Likewise, contemporary alpaca research centres and their advances in bio-technologies of reproduction should also be considered a space of *cultural* production (Kirsch, 2014). Both remain focussed on infusing species power in the alpacas. This vital economy therefore embraces – and indeed centralizes – the Andean living world and its “capacity to generate new forms of life from those already existing” (Valladolid Rivera, 1998, pp. 51-52).

The notion also combines the notions of a techno-natural *yacana* in reproductive science, the bio-ecological fix, and the disembodied (yet still lively) commodity (of alpaca wool). Ultimately, the vital economy is upheld by a combined approach to alpaca vitality. Human-nonhuman (*kamayoq*-alpaca) relations in the Andes come together with Western science and technology to re-vitalize alpaca populations and gene pools in new ways. At the same time, this coming together produces a new economic space, where private and public alpaca research stations and the network of *kamayoq* are working towards the same goal of revitalizing the alpaca sector as part of an Andean living world that is also connected to globalized norms in production and exchange. Viewing these connections through the lenses political ontology and ontological positionality helped to highlight the articulations and effects of inter-connection, rather than to dwell on narratives of ‘Modernity’ eroding an imagined

Andean ‘pre-Modernity’. Ontological positionality reflects the dynamic, flexible nature of living worlds, which are not fixed or incompatible. The notion of a ‘vital economy’ – revolving around alpaca vitality – emerges from an acceptance that one can exist in multiple worlds at once.

I do not mean to culturally legitimize the economically oriented bio-technological processes of alpaca science, which arrive in the Andes to enhance production and improve the genetic resource base, before extracting surpluses from these productive increases in order to expand flows of capital in the alpaca sector. As this chapter showed – particularly in conjunction with chapter six – *alpaqueros* remain vulnerable to the whims of this alpaca sector, both in the sense of their unequal economic position and their new connections to a revitalized gene pool. How, then, might the network of *kamayoq* affect this unequal relationship? Francisco Franco insisted that, for *kamayoq* to perform an important role in alpaca reproduction, their training must be more than a ready-made package, and must be embedded in continuous education on alpaca reproduction that relies on robust inter-institutional ties across the Andes in order to establish a regionalized framework for improving alpaca genetic stocks. This framework might better link the ‘improved’ sires coming from places like Pacamarca to the (re)productive practices scattered across the Sierra Sur. *Kamayoq* are well positioned to help manage the outputs from these sires, ensuring that they do not simply get lost in the already in-bred gene pool.

The central challenge is perhaps overcoming the reticence of all potential partners in an inter-institutional framework. For the likes of Alonso Burgos – and arguably of the private alpaca sector in general – the reticence is voiced in terms of the inefficiencies of the public and non-profit sectors, but is also a reticence towards resolving the bio-ecological fix – a cycle that benefits those at the top of the alpaca sector the most. For NGOs, the reticence seems to stem from a reluctance to give up flagship models such as the *kamayoq*, as well as from a reluctance to invest in long-term programmes (understandably due to funding pressures). Overcoming these barriers, however, could help to re-build inter-institutional linkages, therefore re-working *kamayoq* training towards a regionalized, dynamic endeavour that takes Andean diversity and vitality as its starting point, not purely as an economically-conceived distant end-goal. This kind of approach might better balance a substantive, intimate form of

training (in both a charismatic and bio-technological/genetic sense) with a realistic assumption about the kinds of knowledge and skills that the *kamayoq* can take into the field.

EIGHT

CONCLUSION:

SABER HACER IN THE ANDES?

The dynamic form of learning-by-doing (*aprender hacer*) historically embodied by the *kamayoq* has been transformed into a ‘culturally appropriate’ form of ‘ethnic expertise’ on display (*saber hacer*). I have traced this shift, positioning it within ethnodevelopment as a networked constellation of globalized development. First, I positioned the *kamayoq* within the ethnodevelopment constellation and the sites and locations of the Sierra Sur. I then conducted a historical analysis, charting the importance of the *kamayoq* in upholding various forms of political-economic integration across modes of production and governance. The contemporary analysis then illustrated how the *kamayoq* have been established as ‘ethnic experts’ within ethnodevelopment networks. It also revealed the effects of the shift from *aprender hacer* to *saber hacer*, as *kamayoq* operate according to ‘islands of success’ within a ‘sea of poverty’, and yet their respected role in communities is diminishing just as they are expected to take on roles as political leaders. The recently introduced government programme of certification is beginning to exacerbate these effects, as *kamayoq* are being transformed into ethno-entrepreneurial subjects. This national framework developed by IPEBA acts as a kind of ethnodevelopmental *dispositif*, as it conducts the conduct of ‘rural promoters’ – a process that takes on added effects in relation to the *kamayoq*, as it begins to determine *kamayoq* knowledge and expertise according to normalized standards (at the national scale). Certified *kamayoq* transform diverse Andean knowledges into universalized forms of practice designed to enhance rural productivity and national competitiveness.

Building on this contemporary analysis, I addressed some broader issues of Andean development, first by exploring the role of the *kamayoq* in upholding the ‘sacred’ values of reciprocity, collectiveness, and communal ownership. I used the term ‘collective fix’ to

conceptualize some of the ways in which otherwise externalized populations and forms of production are internalized into processes of capital accumulation by virtue of their collective organization. This collectiveness also protects the group from the harshest effects of market participation, thereby ensuring their continued participation. Finally, I conducted a political-ecological and political ontological analysis of the connected world of human-alpaca relations, exploring how the *kamayoq* link the political ontology of Andean sentient beings and the political ontology of Western genetic science. While both serve the same purpose of revitalizing alpaca populations, they operate according to different understandings of ‘vitality’. I therefore use the notion of ‘vital economies’ to link my account of ethnodevelopment and diverse economies to the more-than-human processes and political ontologies that shape Andean worlds. I use the term ontological positionality to reflect the dynamic, flexible nature of these living worlds, which are not fixed or incompatible. The *kamayoq* are currently acting as interlocutors of these living worlds, connecting diverse forms of ontological positionality and ontological politics to produce a particular vital economy in the Sierra Sur. *As such, the kamayoq are caught within an ethnodevelopment paradigm attempting to go in two directions at once: towards state-initiated processes of universalization and normalization; and towards a revaluation and re-affirmation of Andean cultures, knowledges, and living worlds.*

In the remainder of the dissertation, I revisit some of the core components through which I arrived at the above conclusion. First, I revisit the narrative of the *kamayoq* – a relatively untold (and certainly incomplete) story until now. I then summarize the main arguments and contributions of the dissertation by linking the narrative of the *kamayoq* to the various conceptual and theoretical elements, which I have developed recursively through the dissertation. I focus in particular on the notion of decolonizing ethnodevelopment, by revisiting the significance of political-economic integration for understanding the role of the *kamayoq* and placing it into conversation with a decolonial option oriented around cultural diversity. Finally, I turn to the future potential of the *kamayoq*, first in a conceptual sense by reflecting on the degree to which chapters six and seven point to a potential ‘alternative world’ in the Andes; and second, by offering some thoughts on future research directions.

***Kamayog* and structural change in the Sierra Sur**

In this dissertation, I presented a narrative of the *kamayog* that placed them at the centre of the relations and structures that have reproduced Andean communities for centuries. Since the moment the Inka began to reconfigure social relations in the Andes, Andean communities have had to adapt to shifting, often-colonial structures and forces. While the Inka did not change the structure of communities themselves, they reconfigured productive relationships, integrating productive households across the Andes through various mechanisms of redistribution, reciprocity, *and* exchange. They also physically moved populations through the *mit'a* system of corvée labour. As part of the *reducciones* the Spanish then relocated disparate households into concentrated communities in order to entrench colonial rule. At least three of the municipalities in which I conducted my research were formed in this way (Checca, Langui, and Layo). Yet despite centuries of colonial rule, some of the functional relationships within and between Andean communities remained: cycles of symmetrical and asymmetrical reciprocity have governed interpersonal relationships and relations of production; community organization continued to be organized according to assemblies, which reflect internally determined hierarchies of power and respect; and, local knowledge was prioritized and institutionally redistributed in order to support local production systems.

Fast-forward to the mid-twentieth century and the Agrarian Reform programme was initiated as an overt attempt to re-institute some of these Andean forms of organization, which were now also under pressure from globalized networks of capitalist production. The Agrarian Reform established a series of 'cooperatives' across the Andes, and supported them with a network of agricultural services. Despite the overall failure of the Agrarian Reform programme, these cooperatives continue to shape Andean relations, as communities emerged from the failure according to autonomous units of collective control over land and resources.

Nonetheless, the failure of the Agrarian Reform, along with the continued concentration of power and resources in the capital of Lima and a handful of other coastal cities, prompted the rise of the Shining Path and a period of Maoist insurgency in the Sierra Sur. It was not until Alberto Fujimori took the helm as President in 1990 that the Shining Path was finally ousted from its position of regional power and control. Yet Fujimori instigated his own insurgency: a series of aggressive neoliberal restructuring packages that later became known

as *Fujimorismo* and Fujishock. State support to rural areas and agricultural services were rapidly withdrawn. Fujimori built bright orange schools in rural communities and yet decimated the education system, leaving few teachers to staff these monuments of his presidency. Andean communities were left largely service-less and support-less.

In an attempt to fill the gap left by *Fujimorismo*, a series of non-governmental organizations began to populate the Sierra Sur, particularly in the 1990s. Acting as ‘flanking mechanisms’ for the retreated state, these NGOs implemented a series of projects and programmes designed to establish a network of rural services that could operate independently of state support without charging the prohibitive costs associated with private sector agricultural extension. Paradigms such as farmer-to-farmer (*campesino-a-campesino*) extension proliferated as NGO capacity building and training programmes began to establish a third sector of agricultural services. It was well into the twenty-first century when the Peruvian state realized the dual benefit of these programmes: they helped to resolve issues of under-productivity and non-participation in broader markets amongst rural producers; and they did so in a cost-effective way that required little in the way of state investment.

Having recognized these benefits, and having re-cast itself as an “innovator” for socially inclusive development, the Peruvian state increasingly took an interest in promoting and formalizing these networks of independent service providers. While the Ministry of Agriculture and other related state institutes (such as INIA) have been working with these networks for decade, state interest in formalizing them came to fruition in 2010 with the establishment of SINEACE and IPEBA – two institutes designed to overhaul education in the country. With the approach is couched in rhetoric of productivity, competitiveness, and employability, IPENA was charged with establishing a formal mechanism for certifying rural knowledge extension workers.

Throughout all of these structural shifts, the *kamayoq* have not only been present, they have often played a fundamental role. First, the Inka capitalized on the presence of the *kamayoq* as a social group of temporally rotating irrigation experts who helped to maintain the pre-Inka societies of hydraulic agro-pastoralism. Under the Inka, the *kamayoq* functioned as a variable class of semi-elite specialists, operating within sectors of state governance and enforcement, agricultural production, commodity production, socio-cultural reproduction, and cultural service provision. As such, they helped to uphold the regionalized production

networks of the Inka state, as well as its system of forced reciprocity and *corvée* labour. With Spanish colonization, the *kamayoq* offered a valuable pool of skilled labour, but their role was ultimately collapsed into a delegated form of stewardship, with respected leaders of Andean communities taking on the more generic term of *cacique* (which was initially synonymous with the indigenous *kuraka* but became increasingly broad as community leadership roles became less well defined).

Spanish colonization did not occur instantaneously: it took centuries for government and administrative systems to be established. While built on a basis of existing local institutional structures, these systems were modelled to replicate European images of hereditary authority and designed to overhaul and entrench colonial governance. By the late eighteenth century, however, *kamayoq* seemed to have disappeared from official records. This is not to say that they disappeared entirely; there is some evidence to suggest that the *kamayoq* had returned to some of their more grounded roles as rotational community-based experts. In the small community of Mollebamba (Antabamba, Apurímac), for example, *kamayoq* continue to function as a rotational group that takes responsibility for annual potato harvests.

It was not until the late twentieth century that the *formalized* role of the *kamayoq* began to resurface, largely due to the interventions of internationally financed development programmes. NGOs and a selection of government-funded programmes trained the *kamayoq* to perform a ‘culturally appropriate’ role within the proliferating *campesino-a-campesino* model of providing agricultural services and practical education. Following an initial period that focussed on irrigation, organizations such as Soluciones Prácticas took the lead in training a broader cadre of *kamayoq* as ‘ethnic experts’ in fields such as Andean grains, livestock health, nutrition, and reproduction, the management of pastures, reforestation of hillsides, seed storage, and revolving funds of potato varieties. This early period focussed almost exclusively on technical issues of agro-productivity.

Most recently, however, the re-institutionalization and re-formalization of the *kamayoq* has expanded beyond such a technical remit to re-insert the *kamayoq* into multi-scalar state networks for governing populations and production. With the newly introduced state system of certifying the competencies of rural extension agents and livestock promoters, *kamayoq* have been presented with a new opportunity and new responsibilities. The opportunities in further training that come through the certification process are expected to transformed into

productive increases that are better connected to broader markets. The knowledge gained by the *kamayoyq* through training brings improved livelihoods, but it must also conform to state-approved notions of what *kamayoyq* should be and how the knowledge should be put into practice. As *kamayoyq* extend this notion to other *campesinos*, they participate in conducting the conduct of Andean subjects, livelihoods, and communities. With the opportunities of employment that emerge from processes a formal government certificate, *kamayoyq* are expected to continue improving their employability and to actively participate in the labour market. Their new leadership role seems to increasingly be one of demonstrating the purported benefits of market participation and integration.

To a certain extent, the insertion of the *kamayoyq* into the national programme of certification seems to have fulfilled the symbolic, discursive, and practical re-institutionalization of the *kamayoyq* within formalized structures of governing resources and development in the Andes. While it would be naïve to make any causal links between the formal role assumed by *kamayoyq* within the rigid structures of Inka governance and their role today as state-certified service providers, it is difficult to ignore some of the parallels. For example, while their re-institutionalization in a formal sense began in the sector of agricultural production, they have since taken on roles in commodity production (e.g. artisanal production of alpaca-related products), state governance (as formally certified extension agents and employees within municipalities), and leadership in establishing forms of socio-economic organization (such as by heading cooperatives, or establishing associations of *kamayoyq*).

However, it would certainly be a stretch to suggest that a wide variety of formalized *kamayoyq* might re-emerge according to sectors of production and reproduction – such as those listed in **Table 3** and organized according to **Figure 7** (in chapter three). The organization of the Inka state and its particular combination of forms of political-economic integration was unique to this centrally governed federation of diverse states (the formal name for the Inka state – *Tahuantinsuyu* – literally translates as ‘four parts united among themselves’ or ‘fourfold domain’ (Rostworowski & Morris, 1999)). While the ways in which the *kamayoyq* helped to uphold this state should not be ignored, their contemporary role will bring new responsibilities of supporting Andean production systems while meeting state expectations of improved productivity, increased competitiveness, and enhanced employability, as well as of intersecting with the globalized production networks of agriculture and mineral extraction. In

this dissertation, I explored how these responsibilities are unfolding. Below, I summarize the main arguments of my analysis of the recent trends, before offering some conceptual reflections on the significance of these arguments and some thoughts on future research.

Summary of arguments and contributions

Overall, the particular narrative of the *kamayoq* I developed in this dissertation – which I briefly summarized above – has not only shed light on this shifting Andean phenomenon, but when placed into the context of an ethnodevelopment paradigm it also reveals some important insights into the nature of development in the Peruvian Andes. I use ethnodevelopment to refer to a particular articulation of the networked effects of a broader development constellation – one that explicitly puts culture and ethnicity to work. I approached this constellation by developing an ethnography that drew connections between the seemingly localized practices of the *kamayoq* and the multi-scalar, structural conditions of the shifting patterns of ethnodevelopment within which they now operate. This networked ethnography built on a multi-sited and multi-locational approach, whereby the ‘sites’ were the dynamic intersections of the ethnodevelopment constellation (the projects, programmes, and interventions of development agencies), and locations were the places where these intersections are unfolded by local actors such as the *kamayoq*. While this methodology presented challenges of multi-positionality, I argued that understanding the effects of the ethnodevelopment constellation as a series of polymorphous engagements helps to locate *kamayoq* in relation to other *campesinos*, development practitioners, Andean forms of community organization, government decision-makers, nonhuman and sentient beings, and academic researchers, among other actors of the constellation.

In exploring these polymorphous engagements, I made three broad analytical moves in the dissertation, all of which revolved around the narrative of the *kamayoq* but simultaneously involved a recursive (re)working of theory on ethnodevelopment. First, I set the scene (in chapter two) by: a) elaborating ethnographic detail on the role of the *kamayoq* within the context of ethnodevelopment, and by linking this detail to the sites and locations of the study; and b) conducting a historical analysis (in chapter three) of the *kamayoq*, which was required in order to understand the historically-constituted nature of this phenomenon.

This historical analysis revealed the institutional role of the *kamayoq* in integrating regionalized production systems across both space and time, thereby also illustrating how the diverse knowledges and practices of the *kamayoq* have been put to work as part of the rational means of development. Empirically, such an account had not previously been developed; the historical component of the *kamayoq* story had not been told thoroughly. In addressing this gap, I concluded by suggesting that the *kamayoq* phenomenon could be read as a particular technology of governmentality, which has operated *across* different eras of colonial conquest and different forms of political-economic organization and integration. I was only able to arrive at this conclusion by developing a Polanyian framework of political-economic integration – a conceptual framing that I reflect further upon below. These conclusions have implications for how we understand ethnodevelopment today and its attempt to put the *kamayoq* to work. I explored these implications throughout the thesis, and I provide some final reflections below.

The second analytical move of the dissertation was to link the historically constituted nature of the *kamayoq* phenomenon to its unfolding within contemporary networks of ethnodevelopment. In chapter four, I re-told the contemporary history of the revival and re-institutionalization of the *kamayoq* as a network of specialists tasked to uphold Andean production systems. In doing so, I moved beyond existing accounts of the instrumental revival of the *kamayoq* to provide a political-economic and socio-cultural analysis of the effects on *kamayoq* subjectivities and of the *kamayoq* at work within Andean communities. I argued that contemporary development networks have built a form of ‘ethnic expertise’, and that as ethnic experts, the *kamayoq* take on a conflicting role. A static form of knowledge-on-display (*saber hacer*) has largely displaced the dynamic forms of knowledge (*aprender hacer*) historically embodied by the *kamayoq*. This shift in knowledge reproduction has unfolded according to the uneven spatial politics of development interventions, thereby creating a patchwork of ‘islands of success’ amongst a ‘sea of poverty’. Both of these trends are having an effect on the cultural identities and political positions of the *kamayoq*, as their traditional positions as respected community members are being eroded while their political role as a group of leaders is being emphasized – and yet not substantively supported – by development NGOs. These findings contribute to the continuing debates around the efficacy of ‘bottom-up’ and

participatory approaches to development, tying these debates to the insights that the ethnodevelopment frame yields in highlighting the role of ‘ethnic expertise’.

In chapter five, I advanced the contemporary story of the *kamayoq*, addressing the newly introduced national framework of certification, governed by the institutes of SINEACE and IPEBA. I argued that this programme has further formalized the ‘ethnic expertise’ of the *kamayoq*, while also promoting the transformation of these ethnic experts into ethno-entrepreneurs charged with leading by example in terms of employability, being savvy in the market, and capitalizing on new opportunities of upward mobility. In framing the national system of certification according to a combined discursive strategy (focussed on intercultural education with equity, human capital and competitiveness, a new rurality, and decentralization), IPEBA developed a spatially and temporally normalized list of knowledge indicators according to which *kamayoq* competencies could be objectively assessed.

This framework, I argued, acts as a kind of ethnodevelopmental *dispositif*, as it conducts the conduct of ‘rural promoters’ in general. This process takes on added effects in relation to the *kamayoq*, as it begins to define – according to national standards – what is and is not *kamayoq* knowledge and expertise. If the *kamayoq* reflect a network of ‘culturally appropriate’ knowledge mobilizers, it is increasingly the Peruvian state that is determining what can and cannot be counted as ‘culturally appropriate’. Those *kamayoq* who do not meet the state’s normalized criteria are unable to acquire an IPEBA certificate. The very fact that the *kamayoq* are subsumed within the broader categories of ‘livestock promoter’ and ‘rural extensionist’ indicates the ways in which this national programme internalizes culture within its own remit. The Peruvian state seems to fit James C. Scott’s dystopian characterization: it is the embodiment of norms, rules, and technical knowledge, which are used to control and improve populations. The difference here is the fact that ‘cultural appropriateness’ has been mobilized by the Peruvian state to entrench its norms, rules, and forms of technical knowledge: culture has been put to work in order to strengthen the state’s own governmental capacities.

The third, and final, analytical move I made in the dissertation was to take the contextual, historical, and contemporary analyses of the *kamayoq* and apply the insights to broader questions of Andean development. In chapter six, I did this by exploring the relation between the *kamayoq* and what have been described as sacred Andean values of reciprocity, collectiveness, and communal ownership. My conclusions pointed to some of the limitations

of promoting collective solutions in the remote Andean communities. Collectiveness is not a panacea to development and livelihood problems, especially when it is promoted both as routine and as a strategy to enrol otherwise externalized actors into broader market systems. Indeed, collectiveness, communal ownership, and reciprocity all exist alongside market exchange in the Andes, within a kind of Polanyian multiplex of social economies that takes on its own form and function according to centuries-old socio-economic practices, forms of organization, and institutions.

To explore how such polymorphous socio-economic engagements take shape in the Sierra Sur, I used the term ‘collective fix’ to conceptualize the ways in which otherwise externalized populations and forms of production are internalized into process of capital accumulation by virtue of their collective organization. While collective organization may exist outside of the market economy, the collective fix reflects the institutionalization of forms of collective organization designed specifically to ensure the market participation of individuals otherwise deemed incapable of effective market action. This collectiveness also protects the group from the harshest effects of market participation, thereby ensuring their continued participation. This relation is ‘fixed’ in the sense that collective organization has become routinized (cf. the ‘institutional fix’ as a (temporary) holder of contradictions (Peck & Tickell, 1994)). Collectiveness has become something of a fixed social relation, partly due to Andean histories of social organization, and partly due to ethnodevelopment programmes that instrumentalize collectiveness both to ensure market participation and to protect the collective from the harshest effects of market participation.

Finally, in chapter seven I broached the topic of Andean socionatures by conducting an analysis of the connected world of: the genetic traits of alpacas; Andean *alpaqueros*; networks of knowledge and expertise; the role of alpacas (and their genetics) in Andean living worlds; the contemporary globalized alpaca sector; and, the alpaca experimentation centres that have taken as their task the ‘re-wilding’ of alpaca genetics and the revival of the alpaca sector as a whole. Elucidating these connections took the narrative from the pre-Hispanic rituals of bringing species vitality to alpacas, to the bio-technological and genetic research being conducted today in order to ‘refresh the blood’ of what has been characterized as an alpaca population ailing from generations of in-breeding. The *kamayoc* continue to link these components as they simultaneously reproduce Andean forms of animal husbandry that draw

energy from sentient entities, and connect *alpaqueros* (albeit somewhat sporadically) to circuits of scientific expertise and bio-technological techniques of reproduction and enhancing animal health. Viewing these connections through the lenses of political ecology and ontological positionality helped to highlight the articulations and effects of inter-connection, rather than dwell on narratives of ‘Modernity’ eroding an imagined Andean ‘pre-Modernity’. Ontological positionality reflects the dynamic, flexible nature of living worlds, which are not fixed or incompatible. The *kamayoq* are currently acting as interlocutors of these living worlds, connecting diverse forms of ontological positionality and ontological politics. As their role evolves, it will be important to re-assess what kinds of vitality (in an ontological sense) are being supported by *kamayoq* knowledge-in-practice.

In developing this analysis through the dissertation, I have therefore made three core assertions:

1. Uncovering the historical constitution-in-relation of the *kamayoq* (that is, the history of how the *kamayoq* have evolved in relation to other institutions, structures, and environments) points to an approach that goes beyond thinking merely in terms of ethnodevelopment’s opposition between instrumentalization and plural, autonomous empowerment. The revival and re-institutionalization of Andean socio-cultural practices, such as the *kamayoq*, reflects a long relational history; these socio-cultural practices are not revived simply for the instrumental purposes of ethnodevelopment or as part of a process of cultural affirmation that supports a programme of decolonization. Only by paying attention to these histories can we attend to the resulting mixture. I did so by illustrating the central, yet relationally coupled, role that the *kamayoq* have played in upholding various forms of political-economic integration – a framework that I reflect further upon below.
2. Programmes of ethnodevelopment increasingly rely on the creation of ‘ethnic experts’, and through programmes of professionalization these experts are transformed into ethno-entrepreneurial subjects. As such, the knowledge and practice of these experts is increasingly re-moulded by the *dispositif* of ethnodevelopment, and by the *technique* of a governmental state focussed on making indigenous knowledge fit within Western notions of technical resolution. Despite the participatory, bottom-up approaches to exploring how plural forms of knowledge and culture can be included within broader

development agendas, programmes of professionalization – such as the IPEBA system – ultimately determine what is and is not indigenous practical knowledge, thereby conducting the conduct of indigenous subjects according to established techniques of governmentality.

3. The notion of ‘Andinidad’ – or the Andean way of doing things – fails to account for the complex, relational living world in which the *kamayoc* are positioned. It creates a false opposition between imagined ‘Andeanism’ and hegemonic ‘Western-ness’. I illustrated the limits to this approach in two ways. First, the ‘sacred’ Andean values of reciprocity, collectiveness, and communal ownership are not inimical to the market logics promulgated by Western states. In fact, collectivism can operate in congruency with market logics, as the notion of a ‘collective fix’ is designed to capture. Second, through an analysis of human-alpaca relations I showed that the notion of vitality operates both through the sentient beings of Andean political ontology, and through the scientific rationality of Western political ontology. Both aim to instil vitality into alpaca populations; and in both alpacas play a role (such as in racing up mountains, providing a foetus for reproductive ceremonies, or in possessing particular genetic qualities that affect husbandry and reproductive practices).

Building on these three insights, in the remainder of the conclusion I branch out to address some remaining conceptual and theoretical questions in terms of ethnodevelopment and the potential for diverse worlds to be held in continuous practice in the Andes.

Revisiting ethnodevelopment

Throughout the dissertation, I have deployed a two-fold interpretation of the notion of ethnodevelopment, which builds on Andolina et al.’s (2009) conceptualization. On one hand, instrumental approaches to culture seek to internalize culture as an institutionalized resource into the workings of a globalized development constellation. On the other hand, more plural understandings of culture-as-creativity offer the potential for conceptualizing development as a diverse, transcultural space that facilitates the autonomous empowerment of different socio-cultural groups without imposing Western ontologies or epistemologies.

In exploring the case of the *kamayoq* through such a frame, I highlighted four aspects of contemporary ethnodevelopment in practice. First, ethnodevelopment is historically constituted (by a variety of competing discourses), but its policies and practices often embody an assumed rigidity, and a timeless form and function is imposed upon cultural practices and institutions. Second, contemporary ethnodevelopment is multi-scalar, connecting globalized development networks to local and contextual aspirations for change, and the processes that underpin them. While various *dispositifs* of ethnodevelopment work to conduct the conduct of actors such as the *kamayoq*, these *dispositifs* are continuously being re-shaped by the ways in which the *kamayoq* assert their own aspirations and begin to define their own trajectories of development according to horizontal networks of reciprocity *and* exchange. Third, ethnodevelopment policy simultaneously works to include indigenous populations and cultures in prevailing development paradigms and market-oriented norms of capitalist development, and protect these cultures and populations from the uneven effects of such inclusion. Fourth, ethnodevelopment shrouds difference and diversity, even as it attempts to celebrate and incorporate it. We need ways of accounting for such diversity, and of actively building the bridges and articulations among political projects with varying normative and critically deconstructive goals.

Although I built upon Andolina et al.'s (2009) conceptualization of ethnodevelopment, in their account it is difficult to discern precisely how these forms cultural diversity and plurality come about, and how they are actively supported and celebrated. Having rejected some decolonial perspectives on the grounds of Andean romanticism, their treatment arguably focuses most on how the transnational networks of indigenous movements intersect with those of globalized development. The question of how more plural and diverse understandings of culture might emerge and come to shape developmental trajectories is left largely implicit in their account.

To resolve this issue, I turned to some of the decolonial scholarship emerging from Latin America, and particularly Peru, to explore how processes of cultural re-affirmation and pedagogical plurality might re-shape our understanding of ethnodevelopment. This body of scholarship contrasts the instrumentalist use of culture within the development constellation, arguing for a rejection of Western ontologies and modernist notions of progress. How, then, did bringing these two forms of scholarship together help to illuminate the case of the

kamayoq? How does the case of the *kamayoq* shed light on the intersection of these worlds in concept and practice?

First, a historical analysis of pre-Hispanic practices such as those of the *kamayoq* helps to overcome the tendencies of essentialism and romanticism evident in both approaches. While instrumental approaches seek to appropriate and internalize the *kamayoq* by virtue of their pre-Hispanic origins, decolonial scholarship has romanticized these origins and separated them out from the historical discourses and practices that have shaped them for centuries, and through which they now appear. Accounts of ethnodevelopment-at-work therefore require such historical approaches, which help to analyze cultural phenomena on their own terms, rather than as disempowered tools within a broader tug of war between distinct epistemic worlds (Western, modernist development and Andean animist cultural diversity).

Second, chapters four and five illustrated that the deployment of ‘cultural appropriateness’ – and the embodiment of such appropriateness in the *kamayoq* as ‘ethnic experts’ – yields a spatially patterned world that is built on distinct trajectories and yet also the subject of the normalizing strategies of development. The case of the national system of certification, for example, revealed how attempts to normalize *kamayoq* knowledge-in-practice act as a *dispositif* of ethnodevelopment in conducting the conduct of *kamayoq* according to pre-determined and fixed ‘functional fulfillments’. The incorporation of culture, in this sense, simultaneously shrouds and celebrates cultural diversity in practice. It does so according to both the modernist pretensions of a revived Peruvian state keen to incorporate culture as an employable asset in order to drive productive improvements in rural areas. Yet it also does so on the terms of the *kamayoq*, who have helped to define the knowledge indicators and functional fulfillments and shape how they are put to work. Cultural diversity and knowledge plurality is embraced in principle through the practice of developing the certification system through successive rounds of *mesas técnicas* (technical roundtables), and yet eroded in practice through the state-imposed process of national normalization. The consequence for the *kamayoq* is that their history – their intimate ties to the cultural production of Andean living worlds – is eroded as they are inserted into the broader category of ‘rural promoter’.

Unless better articulations between these understandings of Andean knowledges – between state assumptions that *kamayoq* knowledge-in-practice can be normalized across Peru and Andean understandings that knowledge is continuously in the making according to

contexts of practice – then the unique elements that have upheld the *kamayoq* phenomenon until now may be lost. These elements include the dynamic conception of knowledge-as-a-process, historically constituted human-nonhuman relations, and the upholding of culturally specific reciprocal relations in Andean communities.

I therefore argued that institutional spaces should be designed for the generation of non-Eurocentric and decolonial thought, including by making principles such as *iskay yachay* an explicit focus. Instead of building the IPEBA system on Westernized assumptions of what educational reform should entail and what its role should be (increased productivity, employability, decentralization, and a new rurality), a more dynamic system would build out, horizontally from locally defined priorities in terms of knowledge and agrarian production. A horizontal, diverse, and plural system of recognizing the *kamayoq*, and one based on a deep historical understanding of their role in Andean societies, can help establish new spaces and communities of thought and action, rather than simply insert them as ‘culturally appropriate’ others within re-worked forms of state governmentality and Western development intervention. Reconceiving ethnodevelopment along these lines can enable explorations of how cultural diversity might be networked horizontally in order to delineate and construct plural trajectories and outcomes of development. To explore this potential in terms of socio-economic re-organization in the Andean living world, I deployed a Polanyian approach to political-economic integration and explored the decolonial proposal of cultural diversity. I now turn to the implications of reading the case of the *kamayoq* through these two lenses.

‘Other’ worlds? Polanyian integration and the decolonial option

Above, I concluded that the instrumentalizing and plural sides of ethnodevelopment are not as distinct as Andolina et al.’s (2009) two-fold conceptualization might imply. Culture can be multiple, flexible, and somewhat built from the bottom up, and yet still contribute in instrumental ways to neoliberal ethnodevelopment agendas (as the case of IPEBA certification illustrates). Likewise, the instrumental inclusion of ‘culturally appropriate’ knowledge systems, such as those of the *kamayoq*, and the degree of associated cultural recognition can also yield benefits in terms of strengthening cultural ties and potentially opening the doors to subsequent and/or deeper processes of cultural affirmation.

Eduardo Grillo might turn in his grave at such a conclusion; for him, cultural affirmation was directly opposed to Western capitalist development. Attempts to combine “the best of the West with the best of the Andean culture”, he argued (1998b, p. 236), is to support “an eclectic and impossible stance”. While this may be normatively true – in the same sense that one cannot subscribe fully both to a Western and Andean ontology – it does not necessarily circumscribe forms of ontological positionality that maintain an openness to more than one, but less than two ways of being in the world (to paraphrase Marisol de la Cadena (2010)). Overcoming the various forms of instrumentalizing culture within with contemporary ethnodevelopment constellation might therefore mean being attentive to how a diversity of means can reach similar ends.

What do these conclusions mean for two theoretical threads that run through the dissertation: a Polanyian approach to political-economic integration; and a decolonial approach to the reaffirmation of cultural diversity, epistemological plurality, and the Andean living world? The Polanyian analysis was a useful way of charting the shifting position – the shifting form and function – of the *kamayoq* within a broader institutionally embedded understanding of political-economic change. This approach draws on Polanyi’s anthropological and ethno-historical analyses, where he charted the various ways in which the four forms of integration – reciprocity, redistribution, exchange, and householding – are combined and instituted at different times. While it is a theory developed by a Western political-economist, the approach is inherently attentive to diversity – to the ways in which different forms of economic organization operate alongside each other, producing spatially and temporally unique results according to institutional histories. This approach therefore helped to chart the historic importance of the *kamayoq*, as well as how they fit into a diverse economy in the Sierra Sur today. This contemporary diverse economy is upheld by institutionalized actors such as the *kamayoq*, who have helped to maintain Andean social relations – such as *ayni* (reciprocity) and *iskay yachay* (reciprocity of knowledges) – while also participating in increasingly complex networks of market exchange across the Sierra Sur.

This strength of the Polanyian approach is arguably a weakness of the decolonial option: pre-Hispanic practices are often separated out from the processes and discourses through which they now appear. Despite emanating from post-colonial critiques, the decolonial option often places Andean principles and practices as a direct challenge to Western development,

thereby shrouding the complex histories that have shaped them both in unison for the past centuries. Yet scholarship on decolonization is also required to fully understand the social practices and institutions upon which the above Polanyian analysis can be conducted. The *kamayoq*, relations of *ayni*, and the importance of *iskay yachay*, for example, must be understood in relation to the Andean living world; they must be understood as historically significant phenomena on their own terms. Doing so places focus on the everyday, grounded elements of enacting decolonial options, of re-building paradigms such as *sumak kawsay* – a broad cosmovision that is often invoked and yet rarely understood from the ground up. The *kamayoq* may yet emerge as the everyday basis of action upon which broader principles such as *sumak kawsay* can be built, especially when connected to other grounded principles such as *iskay yachay*.

What happens when these two perspectives collide? In chapter seven, I pointed to the ‘vital economy’ of alpaca (re)production. While the alpaca industry is ‘vital’ to the rural livelihoods that dot the Sierra Sur and to the broader Peruvian economy, this vital economy is upheld by a combined approach to alpaca vitality. Human-nonhuman (*kamayoq*-alpaca) relations in the Andes come together with Western science and technology to re-vitalize alpaca populations and gene pools in new ways. At the same time, this coming together produces a new economic space, where private and public alpaca research stations and the network of *kamayoq* are working towards the same goal of revitalizing the alpaca sector as part of an Andean living world that is also connected to globalized norms in production and exchange. Grimaldo Rengifo has reminded us that in the Andean living world, “as we nurture the alpacas, they nurture us” (1998, p. 109); this is the capacity to allow oneself to be nurtured, rather than to be “the king of creation” (2009, pp. 41, my translation). This relation exists today in the ways in which alpacas affect genetic and reproductive techno-science; they also continue to shape the ways in which the *kamayoq* translate this techno-science into practice across the Sierra Sur. The space of this vital economy is therefore one in which diversity is built on a horizontal network that continues to uphold Andean principles of the living world, and yet refuses to separate itself out from science and technology, or the market processes within which they proliferate.

How, then, might the network of *kamayoq* affect this vital economy? Francisco Franco insisted that for *kamayoq* to perform an important role in alpaca reproduction, they must be

embedded in a regionalized framework for improving alpaca genetic stocks in ways that do not simply resort to insertion or non-insertion into market systems. This framework might better link the ‘improved’ sires coming from places like Pacamarca to the (re)productive practices scattered across the Sierra Sur. In this context, *kamayoq* are well positioned to help manage the outputs from these sires, potentially ensuring that they do not get lost in the broader gene pool. The central challenge is perhaps overcoming the disjuncture of equal participation in a vital economy by all interested partners within this inter-institutional framework: genetic research centres; NGOs; *alpaqueros*; government and academic research centres; *kamayoq*; and, *alpaqueros*. It remains to be seen whether associations of *kamayoq* can have a significant impact in this regard, especially given the limited degree of institutional support afforded to cooperatives and associations in Peru.

Future directions

As a research topic, the *kamayoq* evade neat, all-encompassing conclusions. The conception of knowledge embodied by the *kamayoq*, for example, is dynamic and always in the making. The Andean living world is not entirely conceivable (or is perhaps entirely inconceivable) through a Western lens of development and progress. The affect embodied in alpacas and their intimate relations with *alpaqueros* is really only a world that can be known through a lifetime of experience. I end the dissertation, then, not with some suggestions on how to pursue some imaginary, fixed truths about the *kamayoq*, but with some thoughts on further opening up research avenues. After all, the *kamayoq* remain an under-explored component to the Andean living world, despite increasing interest in the potential alternative ways of being that are re-emerging from the region. I therefore point to three broad areas that could provide fruitful terrain for further analysis.

1. *Kamayoq* and the decolonial option. I have only begun the work of exploring the relations between the *kamayoq* and other components of a decolonized Andean living world. More scholarship is certainly required to connect these issues, to explore a reconstituted Andean world in concept and practice, after centuries of colonial and neo-colonial pressures and within the context of proliferating but diverse arrangements for market exchange. Fruitful investigation might explore how the *kamayoq* tied together the multiple principles and

practices of the Andean living world, more systematically uncovering how cultural diversity and plurality can be built into an Andean way of doing things (*Andinidad*) that does not artificially separate itself out from the historical discourses and practices through which it has evolved. This work might also explicitly link the *kamayoq* to other similar phenomena such as the *yachachiq* (peer-to-peer educators under a different title), and comparative studies may be possible. Connecting these components might help to produce a grounded understanding of the everyday forms of Andean living that can help to uphold *sumak kawsay* as an alternative paradigm of development. Without these analyses, *sumak kawsay* will likely remain a contested ideal, dismissed as a rhetorical device.

2. **Diverse economies and post-neoliberalism.** The above proposed research into what generates the distinctiveness of the Andean living world can be placed into current debates around ‘diverse economies’ in practice – a field that has evolved from the work of J. K. Gibson-Graham and yet is not entirely constrained to their framing or approach (Gibson-Graham, 2008; Gibson-Graham & Roelvink, 2010; McKinnon, 2013; Roelvink, St. Martin, & Gibson-Graham, Forthcoming). I began linking the *kamayoq* to diverse economies by exploring – in chapter six – the intersection of *Andinidad* with market-oriented processes of structural transformation in the Andes. By building on the first proposed research area, the role of the *kamayoq* and other Andean institutions could be placed more firmly into the diverse economies framework. How, for example, might a horizontally connected network of *kamayoq* associations, all operating according to their own regionally contextualized and autonomously determined norms of practice, affect the broader economic and productive landscape in Peru? Likewise, more work on the notion of ‘vital economies’ could prove fruitful. Rather than focus simply on the capitalist commodification of nonhuman animals, or on non-capitalist human-nonhuman inter-relations, the ‘vital economies’ perspective could yield productive insights on how these perspectives and practices exist alongside each other, thereby establishing a diverse patchwork of economic organization. These proposed avenues of work may help to move beyond my previous contribution to debates on post-neoliberalism in Latin America (Yates & Bakker, 2014). Rather than begin with neoliberalism as the frame of analysis, these avenues of research may reveal an institutionally grounded approach to exploring alternative forms of governing – and indeed socializing – relations of market exchange. It

might be possible, for example, to place collective organization and the socialization of the initial parts of the alpaca supply chain (see chapter six) into the broader context of production networks and commodity chains, thereby uncovering just how far up the chain organized *alpaqueros* can stretch their forms of socialization.

3. The *kamayoq* as a ‘model’? Finally, given the proposal of focussing on diversity and plurality, where does this leave the *kamayoq* as a horizontally organized ‘model’ for knowledge redistribution and development? If the programme of normalization initiated by IPEBA is unsatisfactory, can the *kamayoq* have a role beyond the Sierra Sur? In this context, productive research might focus on programmes such as Soluciones Prácticas’ experiment with helping *kamayoq* to travel to Bolivia in order to train a new generation of *kamayoq*. This approach would also connect to the broader conception of Andean living worlds, as well as to discussions of alternative economies in the region. What lessons – if any – can be taken from the case of the *kamayoq* in the Sierra Sur and applied to similar programmes of horizontal knowledge exchange networks elsewhere? I argued that the *kamayoq* of Sierra Sur are distinct from the more generic ‘rural promoters’ of northern departments such as Cajamarca. Just how far can the concept travel? This research will become increasingly important as pressure continues to be placed on NGOs – by the state and donor organizations alike – to scale-up their successful endeavours. If *kamayoq* are to maintain their relevance to the Andean living world *and* to the ever-expanding constellation of development, more research is required to tease apart what is deeply contextual and what might be universalizable in concept and practice. Only then can any form of spatial expansion of the concept and practice avoid a process of cultural debasement and functional homogenization.

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APPENDICES

Appendix 1: List of key informants

Interviewee	Affiliation	Position
Aréstegui Otazú, Daniel	MEGAZIP – Proyectos productivos y Agronegocios Sostenibles	Consultant, Access to Markets
Arrieta Clavijo, Gabriela	Instituto Peruano para la Evaluación, Acreditación, y Certificación de la Calidad de Educación Básica (IPEBA)	Director, Department of Evaluation and Certification
Barrios, Carolina	Sistema Nacional de Evaluación, Acreditación y Certificación de la Calidad Educativa (SINEACE)	Director
Burgos, Alonso	Pacomarca S.A.	Director
Candiotti Sarimiento, Aída	IPEBA	Director, Department of Evaluation and Accreditation
Canziani Amico, José	Pontificia Universidad Católica del Perú (PUCP)	Professor, Department of Architecture
Cárdenas Suárez, Nilton	Soluciones Prácticas	Veterinarian, Proyecto Paqocha
Ccana Callo, Ernesto	Soluciones Prácticas	Director, Proyecto Paqocha
Champi Guanca, Pio Augusto	Provincial Government of Cusco	Yachachiq representative of community in Paucartambo
Cruz, Alan	Pacomarca	Administrator
de la Torre, Carlos	Soluciones Prácticas, Lima	Programme Coordinator, Marketing and Livelihoods Programme
del Carmen Quispe, Maria	Molle Verde (Buenaventura)	Coordinator, Proyecto Trapiche
Escobal Valencia, Fernando	INIA, Cajamarca	Coordinator of the Transfer of Technology
Escobal, Javier	Grupo de Análisis para el Desarrollo (GRADE)	Principal Researcher
Esquivel Corrales, Hubert	Municipality of Langui	Mayor
Estrada, Andrés	Centro Bartolomé de las Casas (CBC), Cusco	Manager, Social Management of Water Programme
Franco Febres, Francisco	Instituto Veterinario de Investigaciones Tropicales y de Altura (IVITA)-Marangani	Director
Hadzich, Miguel	Grupo de Apoyo al Sector Rural (GRUPO), PUCP	Professor, Department of Engineering, Coordinator of GRUPO
Harman, Úrsula	GRUPO, PUCP	Coordinator of the Sector for Social Research
Hinostroza, Julia	First interview (2011): Soluciones Prácticas, Sicuani Subsequent interviews (2012-13): Provincial Government of Cusco	First interview (2011): Manager, Kamayoq school programme Subsequent interviews (2012-13): Social Worker, Management of Social Affairs
Ho, Raul	Ministry of Agriculture; former consultant to Soluciones Prácticas	

Interviewee	Affiliation	Position
Huamanyauri Méndez, Kary	Universidad Nacional Agraria La Molina, Department of Nutrition, Faculty of Zoology	Assistant of the Unit of Agricultural Extension
Laos Fernández, Alejandro	Mesa de Concertación Para la Lucha Contra la Pobreza	Director of Rural Development and Civic Participation
Leon Roman, Rafael	Gloria Cajamarca	Manager
Lozano Esquivel, Alberto	Municipality of Kunturkanki (El Descanso)	Mayor
Mamani Champi, Edwin	Municipality of Langui	Assistant in Proyecto Cuyes; Yachachiq
Martínez Nina, Yeyson	Soluciones Prácticas	Coordinator, Proyecto Paqocha - Antabamba & Cotaruse
Mendoza Quiste, Raul	Soluciones Prácticas	Coordinador, Proyecto Paqocha - Antabamba
Montero Palacios, Roberto	Soluciones Prácticas, Lima	Manager, Marketing and Livelihoods Programme
Morgan Lora, Peregrina	Ministry of Work and the Promotion of Employment; SINEACE;	President of SINEACE; IPEBA Board of Directors
Pacheco Castañeda, Rolando	Soluciones Prácticas, Cusco	Representative, Regional Office of Cusco
Pacuala, Valerio	Provincial Government of Cusco	Yachachiq representative of Kunturkanki community in Canas district of Cusco
Palomino Ricalde, Rocío	Soluciones Prácticas, Sicuani	Manager, Energy, Infrastructure, and access to Services Programme
Paz Silva, Luis	Sierra Exportadora	Advisor to the Executive President
Peralta Quiroz, Elmer A.	Instituto Nacional de Innovación Agraria (INIA)	Sub-Director of Technological Projection, Department of Agrarian Extension
Quispe, Ignacio	Soluciones Prácticas	Coordinator, Proyecto Paqocha - Ayacucho
Ramirez, Benito	Soluciones Prácticas, Cajamarca	Programme coordinator
Rodríguez Mendoza, Marivel	Soluciones Prácticas	Coordinator, Proyecto Paqocha - Cotaruse
Rojas Lujan, Francisco Fidel	IPEBA	Department of Evaluation and Certification
Salazar Rodríguez, Ivonne	Universidad Nacional Agraria La Molina, Department of Nutrition, Faculty of Zoology	Lecturer, Specialist in Animal Health and Agricultural Extension
Santa Maria, José Carlos	Soluciones Prácticas	Coordinador, Proyecto Paqocha - Antabamba
Silvestre, Santo	Molle Verde (Buenaventura)	Director, Proyecto Trapiche
Taylor, Victor	Gloria Cajamarca	Evaluator for IPEBA
Vargas Ccasaya, Silvio Julian	Municipality of Langui	Coordinator of Participatory Budgets
Vásquez, Urphy	GRUPO, PUCP	Coordinator of the Sector of Renewable Energy and Appropriate Technologies

Interviewee	Affiliation	Position
Velásquez Cárdenas, Luis	IPEBA	Department of Evaluation and Accreditation
Vilca Saico, Juvenal	Municipality of Langui	Assistant in Proyecto Cuyes; Yachachiq
Villanueva Rojas, Paca	Soluciones Practicas	Manager, Unit of Education and Capacity Building

Appendix 2: Anonymous list of *kamayoq* participants

Participant number	Community, District, Province, Department	Gender	Participation	IPEBA certification (status – organization)	Areas of speciality
1.	Quillcaccasa, Cotaruse, Aymaraes, Apurímac	Male	Focus group	In progress – Soluciones Prácticas	Alpaquero – animal health & nutrition, reproduction, and product processing
2.	Pisquicocha, Cotaruse, Aymaraes, Apurímac	Male	Focus group	In progress – Soluciones Prácticas	Alpaquero – animal health & nutrition, reproduction, and product processing
3.	Quellopampa, Cotaruse, Aymaraes, Apurímac	Male	Interview; Focus group; Observation	In progress – Soluciones Prácticas	Alpaquero – animal health & nutrition, reproduction, and product processing
4.	Totora, Cotaruse, Aymaraes, Apurímac	Male	Focus group	In progress – Soluciones Prácticas	Alpaquero – animal health & nutrition, reproduction, and product processing
5.	Pilluni, Cotaruse, Aymaraes, Apurímac	Male	Interview; Focus group; Observation	In progress – Soluciones Prácticas	Alpaquero – animal health & nutrition, reproduction, and product processing
6.	Quellopampa, Cotaruse, Aymaraes, Apurímac	Male	Focus group	In progress – Soluciones Prácticas	Alpaquero – animal health & nutrition, reproduction, and product processing
7.	Pisquicocha, Cotaruse, Aymaraes, Apurímac	Male	Focus group	In progress – Soluciones Prácticas	Alpaquero – animal health & nutrition, reproduction, and product processing
8.	Quillcaccasa, Cotaruse, Aymaraes, Apurímac	Male	Focus group	In progress – Soluciones Prácticas	Alpaquero – animal health & nutrition, reproduction, and product processing
9.	Totora, Cotaruse, Aymaraes, Apurímac	Male	Focus group	In progress – Soluciones Prácticas	Alpaquero – animal health & nutrition, reproduction, and product processing
10.	Quillcaccasa, Cotaruse, Aymaraes,	Male	Interview; Focus	In progress – Soluciones	Alpaquero – animal health &

Participant number	Community, District, Province, Department	Gender	Participation	IPEBA certification (status – organization)	Areas of speciality
	Apurímac		group; Observation	Prácticas	nutrition, reproduction, and product processing
11.	Quillcaccasa, Cotaruse, Aymaraes, Apurímac	Female	Interview; Focus group	In progress – Soluciones Prácticas	Alpaquero – animal health & nutrition, reproduction, and product processing
12.	Chillpacca, Sabaino, Antabamba, Apurímac	Male	Focus group	In progress – Soluciones Prácticas	Alpaquero – animal health & nutrition, reproduction, and product processing
13.	Curanco, Antabamba, Antabamba, Apurímac	Female	Focus group	In progress – Soluciones Prácticas	Alpaquero – animal health & nutrition, reproduction, and product processing
14.	Curanco, Antabamba, Antabamba, Apurímac	Female	Focus group	In progress – Soluciones Prácticas	Alpaquero – animal health & nutrition, reproduction, and product processing
15.	Chillpacca, Sabaino, Antabamba, Apurímac	Male	Focus group	In progress – Soluciones Prácticas	Alpaquero – animal health & nutrition, reproduction, and product processing
16.	Mollucco, Antabamba, Antabamba, Apurímac	Male	Focus group	In progress – Soluciones Prácticas	Alpaquero – animal health & nutrition, reproduction, and product processing
17.	Curanco, Antabamba, Antabamba, Apurímac	Female	Focus group	In progress – Soluciones Prácticas	Alpaquero – animal health & nutrition, reproduction, and product processing
18.	Chillpacca, Sabaino, Antabamba, Apurímac	Female	Focus group	In progress – Soluciones Prácticas	Alpaquero – animal health & nutrition, reproduction, and product processing
19.	Mollebamba, Antabamba, Antabamba, Apurímac	Male	Focus group	In progress – Soluciones Prácticas	Alpaquero – animal health & nutrition, reproduction, and product processing
20.	Quillcaccasa, Cotaruse, Aymaraes, Apurímac	Female	Interview	No	Alpaquero – animal health & nutrition, reproduction, and product processing

Participant number	Community, District, Province, Department	Gender	Participation	IPEBA certification (status – organization)	Areas of speciality
21.	Centro Poblado Menor Otuzco, Baños del Inca, Cajamarca, Cajamarca	Male	Interview; observation	Yes – Gloria	Livestock management
22.	Quillihuara, Kunturkanki, Canas, Cusco	Male	Interview; focus group	No	Animal health; artisanal production; nutrition
23.	Kunturkanki, Kunturkanki, Canas, Cusco	Male	Focus group	Yes – Soluciones Prácticas	Animal health
24.	Anexo Chorrillos, Checca, Canas, Cusco	Male	Interview	Yes – Soluciones Prácticas	Animal health; camelids; reforestation
25.	Pucacancha, Kunturkanki, Canas, Cusco	Female	Interview; focus group; observation	Yes – Soluciones Prácticas	Animal health; animal husbandry; dairy products
26.	Soromisa, Checca, Canas, Cusco	Female	Focus group	No	Animal health; artisanal production
27.	Soromisa, Checca, Canas, Cusco	Male	Focus group	Yes – Soluciones Prácticas	Animal health; animal husbandry; improved homes
28.	Hanansaya Ccollana, Checca, Canas, Cusco	Female	Interview	Yes – Soluciones Prácticas	Animal health
29.	Hanansaya Ccollana, Checca, Canas, Cusco	Female	Interview	Yes – AMARKAS	Animal health
30.	Alto Sausaya, Checca, Canas, Cusco	Male	Interview; observation	In progress – Soluciones Prácticas (complete, but problems receiving certificate)	Animal health
31.	Pucacancha, Kunturkanki, Canas, Cusco	Male	Focus group	No	Animal husbandry
32.	Pucacancha, Kunturkanki, Canas, Cusco	Male	Focus group	No	Animal health
33.	Kcana Janansaya, Kunturkanki, Canas, Cusco	Female	Interview; observation	Yes – Soluciones Prácticas	Animal health
34.	Quillihuara, Kunturkanki, Canas, Cusco	Male	Focus group	No	Nutrition; animal health
35.	Anansaya Ccollana, Checca, Canas, Cusco	Male	Focus group	Yes – Soluciones Prácticas	Animal health; nutrition
36.	Pucacancha, Kunturkanki, Canas, Cusco	Male	Focus group	No	Animal health; artificial insemination
37.	Culcutaya, Kunturkanki, Canas, Cusco	Male	Interview; observation	Yes – Soluciones Prácticas	Animal health

Participant number	Community, District, Province, Department	Gender	Participation	IPEBA certification (status – organization)	Areas of speciality
38.	Layo, Layo, Canas, Cusco	Male	Interview	Yes – AMARKAS	N/A
39.	Orccocca, Checca, Canas, Cusco	Female	Focus group	Yes – Soluciones Prácticas	Animal husbandry
40.	Comunidad Pumathalla, Kunturkanki, Canas, Cusco	Female	Interview; observation	Yes – Soluciones Prácticas	Animal health
41.	Ccollachapi, Layo, Layo, Cusco	Male	Focus group	Yes – AMARKAS	Animal health; guinea pigs
42.	Checca, Checca, Canas, Cusco	Female	Interview	AMARKAS	
43.	Tacomayo, Checca, Canas, Cusco	Female	Focus group	No	Cattle breeding
44.	Cebaduyo, Kunturkanki, Canas, Cusco	Female	Interview; observation	Yes – Soluciones Prácticas	Animal health; nutrition
45.	Pucacancha, Kunturkanki, Canas, Cusco	Male	Focus group	No	Animal health; alpacas
46.	Pucacancha, Kunturkanki, Canas, Cusco	Male	Focus group	No	Animal health
47.	Pucacancha, Kunturkanki, Canas, Cusco	Male	Interview	Yes – Soluciones Prácticas	Animal health
48.	Tacomayo, Checca, Canas, Cusco	Male	Focus group	No	Irrigation; animal health
49.	Soromisa, Checca, Canas, Cusco	Male	Focus group	Yes – Soluciones Prácticas	Animal health; nutrition
50.	Chorrillos, Checca, Canas, Cusco	Male	Focus group	Yes – Soluciones Prácticas	Artificial insemination; animal health
51.	Pucacancha, Kunturkanki, Canas, Cusco	Female	Focus group	Yes – Soluciones Prácticas	Animal health
52.	Cebaduyo, Kunturkanki, Canas, Cusco	Male	Interview; observation	Yes – Soluciones Prácticas	Animal health; nutrition; artificial insemination; animal husbandry
53.	Milatunga, Layo, Layo, Cusco	Male	Focus group	No	Animal husbandry
54.	Pucacancha, Kunturkanki, Canas, Cusco	Male	Focus group	No	Animal husbandry; dairy products; improved housing
55.	San Pablo, Sicuani, Canchis, Cusco	Male	Interview	Yes – AMARKAS	N/A
56.	Sausaya, Checca, Canas, Cusco	Male	Focus group	Yes – Soluciones Prácticas	Animal health; artificial insemination
57.	Sicuani, Sicuani, Canchis, Cusco	Female	Interview	Yes – Soluciones	Pastures; nutrition

Participant number	Community, District, Province, Department	Gender	Participation	IPEBA certification (status – organization)	Areas of speciality
				Prácticas	
58.	Pucacancha, Kunturkanki, Canas, Cusco	Female	Focus group	No	Dairy products
59.	Tacomayo, Checca, Canas, Cusco	Male	Focus group	No	Artisanal production
60.	Inca Pucara, Sicuani, Canchis, Cusco	Male	Interview	Yes – Soluciones Prácticas	Animal health
61.	Pucacancha, Kunturkanki, Canas, Cusco	Male	Focus group	No	Animal health
62.	Taypitunga, Checca, Canas, Cusco	Male	Focus group	Yes – AMARKAS	Animal husbandry; sanitation; animal health; nutrition
63.	Sausaya, Checca, Canas, Cusco	Female	Focus group	Yes – Soluciones Prácticas	Animal health; nutrition
64.	Urinsaya Ccollana, Checca, Canas, Cusco	Male	Focus group	Yes – AMARKAS	Cattle ranching; sanitation
65.	Sicuani, Canchis, Cusco	Male	Interview	Yes – Soluciones Prácticas	Animal health; animal husbandry; nutrition
66.	Chuquirá, Kunturkanki, Canas, Cusco	Male	Interview	Yes – Soluciones Prácticas	Animal health
67.	Langui, Langui, Canas, Cusco	Male	Interview	No	Animal health
68.	Chinpatocto Orececca, Checca, Canas, Cusco	Male	Focus group	No	Animal health
69.	Tacomayo, Checca, Canas, Cusco	Male	Focus group	No	Animal health; dairy production
70.	Pucacancha, Kunturkanki, Canas, Cusco	Male	Focus group	No	Alpaca raising; animal health
71.	Kunturkanki, Kunturkanki, Canas, Cusco	Male	Focus group	Yes – Soluciones Prácticas	Animal health; artificial insemination; nutrition
72.	Taypitunga, Checca, Canas, Cusco	Female	Focus group	No	Artisanal production
73.	Ccañihua, Marangani, Canchis, Cusco	Female	Interview	Yes – Soluciones Prácticas	Animal health
74.	Pucacancha, Kunturkanki, Canas, Cusco	Female	Focus group	No	Animal health
75.	Pucacancha, Kunturkanki, Canas, Cusco	Male	Focus group	No	Animal health; dairy products
76.	Sunchuchumo, Sicuani, Canchis, Cusco	Male	Interview	Yes – Soluciones Prácticas	Animal health; nutrition; artificial insemination
77.	Taypitunga, Checca, Canas, Cusco	Male	Focus group	No	Animal health; artificial insemination

Participant number	Community, District, Province, Department	Gender	Participation	IPEBA certification (status – organization)	Areas of speciality
78.	Ccollana, Checca, Canas, Cusco	Male	Focus group	SP	Animal health
79.	Distrito Marangani, Canchis, Cusco	Male	Interview	Yes – AMARKAS	N/A
80.	Soromisa, Checca, Canas, Cusco	Male	Focus group	No	Artisanal production

Appendix 3: Competency norms for rural extensionists specializing in cattle rearing (IPEBA, 2012a)

Unit name & description	Functional fulfillments
<p>Cattle feeding Use feeding techniques according to the development stage of the cattle.</p>	<p>Develop a Feeding Plan for the cattle according to the nutritional needs and characteristics of production. Realize livestock feeding by applying techniques and procedures according to the stages of development and production characteristics. Elaborate and formulate feeding concentrations for the cattle, according to the category, state of production, and the costs of inputs in the area.</p>
<p>Handling and care of cattle Plan and carry out the care of cattle, taking into account the characteristics and conditions of intensive or extensive farming.</p>	<p>Realize and identify the conditioning of livestock in facilities according to their characteristics. Plan optimal grazing management and the installation of cattle in meadows for ecological and efficient use of resources. Plan, organize, and execute the installation of livestock according to their characteristics, and taking into account the minimum requirements for housing. Realize hoof care, dehorning, and other elements of livestock rearing, applying techniques and procedures appropriate to the characteristics and age of the animals, while maintaining standards of health and hygiene. Organize and perform milking to obtain an optimal product, while maintaining standards of hygiene and safety to prevent product contamination. Perform milking procedures and hygiene rules to avoid contamination of milk. Supervise and perform the treatment of diseases of the udder, considering safety and hygiene throughout the process.</p>
<p>Reproductive management Plan, conduct, and advise on reproductive processes for the improvement of dairy cattle, using artificial insemination techniques according to current technology.</p>	<p>Develop a Plan for Reproductive Management and Genetic Improvement, according to production processes. Perform operations of natural breeding to obtain results for the Plan for Reproductive Management. Conduct artificial insemination, taking into account the standards and recommendations of hygiene and care of livestock. <ul style="list-style-type: none"> d. Identify and manipulate females in heat. e. Manipulate semen and insemination equipment. f. Conduct insemination process. Perform pregnancy diagnosis in cattle, and track gestation, preventing and solving possible anomalous problems during the process. Perform midwifery of cattle, considering the type of delivery and taking the necessary precautions to ensure a quick recovery of the cattle.</p>
<p>Livestock health Plan, organize, and execute the disease control program according to the rules established to maintain the health of cattle.</p>	<p>Develop a Disease Control Program, considering the characteristics of the area and the prevalence of diseases. Plan, organize, and conduct the administration of vaccines and medicines to livestock to prevent disease. Organize prevention and conduct the diagnosis of diseases in cattle with the outcome of preventing diseases. Diagnose, treat, and control the most common prevalent diseases according to symptoms and their characteristics.</p>
<p>Organic fertilizers</p>	<p>Organize and provide organic fertilizers based on demand and profitability of production.</p>

Unit name & description	Functional fulfillments
Organize, lead, and execute the production of organic fertilizers, considering demand and profitability.	<p>Prepare materials for the production of organic fertilizers, according to the quantity and characteristics of the selected fertilizer.</p> <p>Selecting organic fertilizer production techniques and production practices to ensure product quality according to the target area.</p> <p>Harvest and store organic fertilizers, considering quality standards and proper conditions for storage, transportation, and application.</p>
<p>Pastures and forages Organize, manage, and execute actions for the sustainable production and management of pastures and meadows.</p>	<p>Organize the management and production of pastures and grasslands according to the availability of resources, soil properties, and production characteristics, for improved performance of pastures.</p> <p>Perform the planning, installation, and maintenance of sustainable pastures and meadows.</p> <p>Performs silage tasks and hay processing, taking into account the characteristics of the pasture and storage conditions.</p>
<p>Dairy production Organize and execute process in the transformation of dairy operations, following rules and standards to ensure product quality.</p>	<p>Use equipment, machinery, materials, and facilities, applying standards of sanitation and hygiene.</p> <p>Employ reception techniques and the standardization of milk for dairy quality.</p> <p>Make dairy and dairy-related products, following procedures and quality standards.</p> <ul style="list-style-type: none"> a. Apply the techniques and procedures for making cheese b. Apply the techniques and procedures for making sweet milk <p>Apply methods of packaging and labeling, using methods to ensure their quality and safety.</p> <p>Perform quality control of the product in accordance with regulations and quality standards.</p>
<p>Agricultural labour Organize, conduct and direct the operations of production of agricultural parcels to ensure product quality, and monitor compliance with safety and environmental conservation.</p>	<p>Implement a Cultivation Plan, considering technical recommendations of land use capacity to increase quality and productivity.</p> <p>Prepare the soil according to the Cultivation Plan and according to the results of soil analysis, soil properties, weather conditions, and crop needs, considering available machines, tools, and equipment.</p> <p>Select and sow seeds, considering: seed variety, health, purity, and physiological maturity; using the right tools; and respecting the Cultivation Plan.</p> <p>Execute cultural practices, according to the stage of cultivation and sowing characteristics, applying appropriate techniques.</p> <p>Select, apply and recommend the use of irrigation techniques, considering crop characteristics and the optimization of water resources.</p> <p>Perform and direct an Integrated Control of Pests and Diseases, taking into account the characteristics of the crop, rules of safety, and environmental protection.</p> <p>Perform the work of harvest, considering the purpose of cultivation and its characteristics.</p> <p>Perform post-harvest activities tending to products according to the phytosanitation characteristics of the crop.</p>
<p>Improvement of housing Plan and carry out the improvement of rural housing in</p>	<p>Develop a Plan for Housing Improvement considering a conducted diagnosis and respecting the socio-cultural characteristics of the population.</p> <p>Implement housing improvements according to the Plan.</p>

Unit name & description	Functional fulfillments
<p>compliance with the socio-cultural characteristics of the population.</p>	<p>Diagnose the requirements for developing the training plan as part of the planning process. Design a training workshop according to the needs and requirements diagnosed. Implement training and learning sessions according to training plans. Develop materials for training courses, taking into account the characteristics of the target population. Develop assessment tools for training courses, relevant and appropriate to the characteristics of the developed topic and target population.</p>
<p>Training Design and develop extension workshops for capacity building, assessment tools, and educational materials</p> <p>Innovation and research Design and develop participatory experiments for adapting crops or breeds, and the introduction of new technologies.</p>	<p>Make participatory inventories of local knowledge on the subject of experimentation. Design the process of experimentation, respecting intercultural norms in their community. Develop procedures for performing adaptive experimentation processes for crops or breeds. Evaluate and transfer the results of experimentation to communities, and give conclusions and suggestions</p>
<p>Information management Provide updates of new technologies and market trend information related to your industry.</p>	<p>Analyze and use documents related to the production chain to develop proposals for the transfer and adaptation of technologies. Determine product prices based on the calculation of production costs and market trends.</p>

Appendix 4: Competency norms for rural services in the production chain of domesticated camelids (Gutiérrez Hermoza et al., 2013, pp. 7-8, 31, 45)

Unit name & description	Functional fulfillments
<p>1. Reproductive management of domesticated camelids: manage and implement best practices in livestock management and fodder production for the sustainable and competitive production of domestic camelids, according to standards of quality and productivity required by the market. Use participatory tools and methodologies to transfer innovations within their socio-economic and cultural context demonstrating attitudes of leadership, cooperation, and respect for the environment.</p>	
<p>a) Manage and implement best practices of the productive management of domestic camelids, such as using the livestock calendar, and recovering local knowledges.</p>	<ol style="list-style-type: none"> 1. Plan and organize breeding, considering the breeding calendar. 2. Organize and conduct feeding practices for a herd of domestic camelids, considering the quantity and quality of forage resource. 3. Design and organize the facilities for a herd of domestic camelids, taking into account local resources and climatic conditions. 4. Plan and organize the prevention and control of diseases in domestic camelids, considering the incidence of diseases prevalent in the area and the characteristics of the herd, while maintaining standards of biosecurity. 5. Perform the identification, selection, and use of productive and reproductive records, applying existing standards. 6. Develop, implement, and monitor the Plan of Reproductive Management for the expected results of productivity. 7. Conduct calving, taking the necessary precautions to ensure the greatest number of offspring. 8. Performs activities in the controlled breeding of a herd of domestic camelids, ensuring the highest fertility. 9. Plan and execute feeding practices, based on the nutritional requirements of the herd and the availability of forage resources. 10. Provide updated technologies and information on market trends related to camelids, for making decisions.
<p>b) Action plans and executes production, development and conservation of fodder for feeding the flock ensure sustained</p>	<ol style="list-style-type: none"> 1. Plan and organizes the sustainable management of fodder and water resources within the productive and communal unit, according to the characteristics of the relationship between water and pastures to determine the appropriate herd size. 2. Make sustainable use of water resources, applying appropriate techniques for the rational and sustainable use of those resources. 3. Perform the conservation and recovery of pasture and rangeland, by closing degraded areas and applying appropriate agronomic practices. 4. Appropriate exploit natural pastures using the grazing system. 5. Execute the incorporation of forage species cultivated on an annual and perennial basis to increase consistent supply. 6. Conduct conservation practices and the storage of fodder for complementary feeding at critical times.

Unit name & description	Functional fulfillments
<p>2. Alpaca shearing: plan, organize and provides services on the best practices of shearing alpacas, according to market requirements and to generate competitive advantages.</p> <p>Organize, implement, and direct activities in manual or electromechanical shearing, considering good practices and standards in shearing, and according to the livestock calendar</p>	<ol style="list-style-type: none"> 1. Plan the shearing process to obtain better yields in the production of fibre. 2. Condition the infrastructure for shearing, taking into account climatic and geographical characteristics. 3. Condition equipment, tools, and accessories suitable for manual or electro-mechanical shearing. 4. Conduct the shearing of alpacas and cleaning of the fleeces, taking into account the technical requirements for a good shearing. 5. Apply techniques in manual or electromechanical shearing, distinguishing between the fleece robe and legs, and taking care of their integrity and quality. 6. Conduct fleecing according to technical standards, taking into account aspects related to the presentation and quality of the fleece. 7. Make an inlay and label the bags of fibre, considering the established technical standards. 8. Possess the infrastructure to ensure the safe production and storage of sheared wool according to technical standards.
<p>3. Master in classifying alpaca fibre: plan, organize, and provide services in the competitive management of alpaca fibre, according to market requirements in order to generate competitive advantages.</p> <p>Classify the alpaca fibre according to Peruvian technical standards.</p>	<ol style="list-style-type: none"> 1. Perform the reception of the batch of greasy fibre, considering the established procedure, recording the quantity, weight, color, and races in the established formats. 2. Run the categorization of the alpaca fleece without fragmenting it, according to its quality, and according to Peruvian technical standards. 3. Run the classification according to Peruvian technical standards.