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Regional narratives, hidden maps, and storied places: cultural cartographies of the Cariri region, Northeast Brazil

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**REGIONAL NARRATIVES, HIDDEN MAPS, AND STORIED PLACES:
CULTURAL CARTOGRAPHIES OF THE CARIRI REGION, NORTHEAST BRAZIL**

A dissertation
Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Department of Geography & Anthropology

by
Jörn Seemann
M.Sc. Universität Hamburg, 1994
December 2010

For Selma and Oliver,
Co-mappers of my life

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Abstract

In recent years, maps and mappings have gained increasing attention in cultural-geographic studies. However, little has been written about how to employ cartographic products and processes as research methodologies in practice. In this dissertation I present four different qualitative mapping strategies that I label cultural cartographies and that aim to critically investigate the relations between geographical knowledge and representation, society and cartography, culture and maps. A region in Northeast Brazil, the Cariri in the state of Ceará, was selected as the space to test these strategies and to show how maps (both historic and contemporary and in their metaphorical sense) help construct, confirm, and even conceal identities and actively shape, define, and redefine a region whose history has been constructed upon official written records and left out less visible regional narratives, hidden maps, and storied places that I aimed to excavate through my mappings. The diversified set of cartographic tools for this study included historical maps and their social lives, mental maps as visual expressions of regional knowledge and worldviews, interviews about maps and mapmaking and the respective regional cartographic culture, and the author's own attempts to translate words into maps and produce cartographic representations. Finally, I argue that these mappings stimulate the engagement and communication with different cartographic perspectives and open up a whole universe of possibilities and perspectives for the mapmaker, map reader, and cultural geographer that are not restricted to the academic setting, but could also be of practical use in society, taking into account that maps are not conceived only as representations, but also as translations and dialogues that help link material culture, discourse and performative ways to comprehend reality.

Chapter One: Introduction A Personal Cartography

“In the beginning was the map, and perhaps I looked upon it so intently in the hope that it would show me where to go, and that it would guide me from the place I was in and didn’t want to be in. It indicated to me, in its geographical entity, that there were places to go to from which I would be able to look back on myself and the place I had come from.”
(Sillitoe, 1975, p.689)

August 12, 2002. A hot and dry Monday morning in the town of Crato in the backlands of Northeast Brazil. I had arrived in the Cariri region at dawn after a bumpy ten-hour bus-ride from the coastal city of Fortaleza. About 200 professors were gathering in the auditorium of the Universidade Regional do Cariri (URCA) in order to take office as new faculty members. The dean initiated this ceremony with a warm welcome speech while the professors patiently listened to her, *standing* in rows on the worn-out, but shiny parquet floor. The dean’s office had “forgotten” the chairs on purpose. This symbolic action aimed to draw the attention of the state government in Fortaleza, more than 300 miles away: Please, do not forget about us. We do not only need chairs for our auditorium, but also financial aid to turn our young institution into a center for education and research.

The moment when we stood in line to personally shake hands with the dean and receive her greetings is still vivid in my memory. I stepped on the podium, and she gave me a T-shirt with the name and the logo of the university – the profile of a stylized wavy landscape under the sun that represented the massive rocks of the Araripe tablelands, a green wall that could be seen in almost any place in the region. *Para vestir a camisa* – to wear the shirt, which means to identify with the university and research, teach and contribute to help it grow and improve.

My area of specialization is “instrumental geography” which includes general and thematic cartography and the interpretation of aerial photos. As a cultural geographer I have been teaching cartography in higher education since 1998. I still remember the day when I signed the papers for my first job as an instructor for cartography and survey methods at the Universidade Estadual do Ceará in Fortaleza. I had three weeks to refresh and update my knowledge in cartography and make myself familiar with compasses, theodolites, and trigonometry. I suspect that during my first semester I must have known only slightly more about the measurement of the Earth than my undergraduate students.

Unsatisfied with the teaching and evaluation methods at the university and critically observing my own practices and strategies, I began to reflect about the relations between maps and culture in order to find out about different ways of thinking, perceiving, and representing space and place that could correspond more adequately to the reality of my students and draw their attention. I realized that the cartographic science with its rules, conventions and totalitarian regime of geometry was only one possible perspective among many other cultural modes of mapping.¹ I decided to dedicate more time to these alternative representations that materialized as sketch maps of the neighborhood, cognitive maps of the world, or as visualized “smellscape”, engaging the various senses – sight, sound, smell, and even touch. However, during all these years, I was not especially conscious of the fact that I was living an intensive and fascinating anthropological experience – my own education as a teacher of geography.

This excerpt from my personal bio-cartography has been a driving force to turn these experiences into a research project. Initially, I was unable to connect the three loose ends of my

¹ In 2006, I organized a book in Brazil. Its title can be translated as “The cartographic adventure: perspectives, research and reflections about human cartography” (Seemann, 2006a). For this collection of texts, I invited geographers and scholars from related areas from all over the country and was able to gather ten articles on topics such as epistemology and philosophy, medieval maps, mental maps, and cartographic education.

reflections in my proposal: region, maps, and culture. These terms are broad expansive concepts and “slippery terms”.² The challenge for me in this dissertation is to connect these concepts. My objective is to elaborate and apply mapping strategies in a region very familiar to me (Cariri in Northeast Brazil), reflect about the relations between culture and maps, and reveal different angles and perspectives on how to expose and represent the identities and culture(s) of a region and their respective dynamics in time and space. The cultural cartographies that I present and test in this study should not be seen as merely academic proceedings, but also aim to serve as a set of practical tactics that could inspire and encourage local and regional initiatives (Aberley, 1993).

Within this context, the expressions *regional narratives*, *hidden maps*, and *storied places* in the title of my dissertation correspond to my three key words *region*, *maps*, and *culture* and will be explained briefly in the following paragraphs.

Regional Narratives

Reading the recent tables of contents of the principal publications in the sub-discipline, regional geography does not appear to be a cutting-edge area for study. Is “region” still a relevant topic for cultural geographers? Post-traditional approaches in cultural geography focus on specific aspects (gender, literature, mobility, etc.) rather than on the overall picture of space, place or territory that frequently represents the mere background and backbone for the geographical setting in a research project. As a result of this, the quest for knowledge and understanding about behavior, emotions, attitudes and other qualities leaves “general aspects” and geographical descriptions in the back stage.

² For culture as a “notoriously slippery concept,” see McDowell (1994, p.148), also Eagleton (2004, p.48). For maps as “slippery witnesses,” see Parry (1976). For the “slippery concept” of regionalization that “varies from writer to writer,” see Ginzburg (1977, quoted in Cutchin, 2002, p.22).

In addition to this, geographers frequently classify cultural geographic research in “foreign” places as regional geography and not as cultural geography, as is the case with Latin America (“Latin Americanist geographers”). On the one hand, there seems to be a tendency to pay increasingly more attention to the “other” in one’s own society. Conversely, geographers “abroad” usually examine more “exotic” places only within the narrow framework of specific approaches (urban geography, historical geography, cultural ecology, etc.).

In the past, regional geographers leaned heavily on the Vidalian model of human geography and studied *genres de vie* and primarily material aspects of culture. In the United States, for example, Carl Sauer (1941) emphasized research on history, material culture, landscape and the relations between “land and life” in order to reconstruct the past. One of his inspirations was Sir Cyril Fox and his book on the cultural picture of Britain’s “personality” and “character” and the “effects of the environment she [Britain] afforded on the distribution and fates of her inhabitants and her invaders” (Fox, 1943, p.10).³ Similar to the French tradition, these geographers were more interested in dwellings than in their dwellers (Brunhes, 1920).

Is the concept of region dead for cultural geography, or can there be a “new” and post-traditional regional cultural geography? Nigel Thrift (1994) provides a description of the state of the art of this study area when he assigns regional geography to the existence of an academic zombie:

Only a very few human geographers nowadays would lay claim to being ‘regional geographers’, and in quite recent times regional geography has been described as if it was in need of exhumation rather than resuscitation. Even worse, it has sometimes seemed as though it has become an acceptable form of professional nostalgia, conjuring up memories of a golden age, now (thankfully) defunct (Thrift, 1994, p.200).

³ Fox added a gender dimension to the personality metaphor when he referred to Britain as “she”.

In the same text, Thrift (1994, p.202) presents a table in which he describes different approaches to the region according to three different “authorities”: the French human geographer Vidal de la Blache, the German political economist and philosopher Karl Marx, and the American literary theoretician and postmodernist thinker Frederick Jameson. He juxtaposes the visions of these three different thinkers of the region and compares their geographies according to criteria such as mode of production, cultural representations and interpretations, principal forms of spatiality and imaginaries. The details that drew my attention were the keywords linked to Jameson’s ideas of representation and interpretation. Whereas Vidal focuses on the pre-modern culture of the French peasant society with its story-telling and the use of natural metaphors and Marx concentrates on nineteenth-century industrial England with its writing cultures based on metanarratives, science, and universals, Jameson’s target is the postmodern America that spins around images and interpretations that emerged through local narratives, hermeneutics, and difference.

In my dissertation I will substitute Jameson’s setting for the “rurban” scenario of the Cariri region in Northeast Brazil with its regional narratives and images that are still waiting to be interpreted and its fuzzy boundaries that are based on geographical imagination, ideas of regional identity, and political discourse rather than on official delimitations that would permit to pin the region down on a map. Within this frame, my project is a contribution to methodological issues that at the same time is an appreciation of regional geography and goes beyond the scope of it:

Grouped around the practice of doing regional geography can be found most of the important problems that human geography faces today. The invocation of regional geography cannot solve these problems but it certainly brings them into focus and, in that act of focusing, it shows us how far we still have to go (Thrift, 1994, p.200).

Within this context, regional geography goes “beyond description” (Lewis, 1985) and the traditional focus on economic issues and also includes “imagined geographies” as Marie Price affirms in her study on the geographical imagination in the Venezuelan Andes:

When geographers do consider the processes that form spatial aggregations, they generally stress material and economic forces over cultural and social drives. They seldom consider regional origins and the interpretive and imaginative processes behind their construction (Price, 1996, p.334-335).⁴

Hidden Maps

In the last three decades, cartography has not only made use of new technologies and mapmaking techniques, but has also opened space for a critical discussion of its own philosophical and epistemological underpinnings (Wood, 1992, 2010; Harley, 1989a; Pickles, 2004). The influence of innovative and (thought-)provoking ideas from other areas, especially from the social sciences and humanities, has led to new approaches and created a more pluralistic intellectual landscape in the discipline. Dodge, Perkins & Kitchin (2009), for example, have invited the mapmaking and mapping community to rethink the map and worked out a “manifesto for map studies” in which they suggest a research framework based on three M-words: modes, methods, and moments of mapping. “Modes” address “alternative ways to think through cartographic history and contemporary practice” (p.220), including maps on a screen, the insertion of cartography in visual culture in general, authorship and (institutional) infrastructures of mapmaking. “Methods” corresponds to the necessity to develop research strategies to study mapping practices and contexts such as the differences between virtual and material maps, the political economy of map production processes, and emotional and ethnographic aspects of

⁴ For Price, “unconventional sources” such as films, fiction, photographs, folk art, and grade-school geography texts among many others should be consulted “in an effort to tap popular attachment and imagery for areas” (Price, 1996, p.352). At the same time, geographers “need not lie awake at night and ponder the exact limits of a regional boundary” (p.352).

mapping. “Moments” entail events, incidents, and accidents that contribute to the understanding of mapping practices and need to be examined in detail. These (hi)stories can be “moments” of failure (i.e. when something goes wrong during the mapping process), change, memory or creativity.⁵

In this dissertation, I will conceive mapmaking and mapping in an even broader cultural sense, beyond purely cartographic practices, as ways of thinking, perceiving, and representing space and place. These actions, performances and processes are not necessarily material and visible, but are encoded in different social practices that always contain a spatial dimension, including the use of maps as metaphors in literature and everyday life. Hence the expression “hidden maps” – (hi)stories beneath the surface of a map, maps that were thought, but never done, spatial narratives in words, culturally-specific performances such as dance, music or art that express ideas of space and place, and other map-like or “mappable” processes and actions.

Storied Places

My idea of “hidden map” is closely related to the third keyword in the title of my dissertation, “storied places”. Space and place are laden with (hi)stories (Basso, 1996, p.48) that serve as a “stuffing” for the cultural geographer. Behind every place hides an almost infinite number of stories, myths, anecdotes, memories, and other human experiences. These “spatial anchors” can also become meaningful narratives. Whereas cultural anthropologists frequently start with the stories that they seek to connect to places during their research, cultural geographers may find their inspiration in a place and its representations. In her study of representations of Hawaii and their translation into the Anglophone language and culture,

⁵ The term (hi)stories is intentional. In this dissertation, I will frequently make use of this word play in order to indicate the close relations between history and narratives, facts and stories.

Cristina Bacchilega (2007) discusses a photo book about legendary places and emphasizes the importance of images that can lead us to the stories: “The images take us ... to its storied places, urgently demanding that we do not simply observe, but that we relate to them – their birth, their demise, conflicts, and yearnings” (Bacchilega, 2007, p.51). In my study, my main image resource will be the map, either in the form of printed details on a sheet of paper through which I will trace back stories and story-makers or as mapping processes extracted from the mind or transmogrified into my own (carto)graphic representations.

It is worth mentioning that the relation between a storied place and its representation are bilateral: a place with something to tell can result in a map, a drawing, a sketch, or any other graphic form whereas these visual resources can also help us to reveal storied places.

Cultural geographers have been very creative in expressing these complex configurations through metaphors. Adams, Hoelscher & Till (2001), for example, have coined the term “textures of place” which

refers not only to surfaces, processes, and structures but also to communication acts and the multiple contexts that create and are constituted by place... [and] highlight the geographic tradition of trying to understand the meanings and processes of place – their material and symbolic qualities – as well as the range of peoples and social relations that continuously define and create social and spatial contexts (Adams, Hoelscher & Till, 2001, p.xiv).

Doing Cultural Geography

The recording of regional narratives, the unveiling of hidden maps and the reading of storied places require a deeper reflection on how to “do” this research that I conceive as a cultural-cartographic study. Blunt et al. (2003, p.3) assert that “there is lots of cultural geography out there”, but not many details about how the researchers obtained their data and drew their conclusions:

[M]ost of this reading matter [publications in cultural geography], while presenting fascinating discussions of, for example, landscape design, imperial cartography, or ideas of nature, will tell you very little about how the work was done in practice. Most pieces of published work in cultural geography are (and to some extent have to be published) presented as completed, neat and tidy arguments with all the loose ends tied away and all the evidence pointing in the same direction (Blunt et al., 2003, p.3).

On the introductory pages of her book *Doing Cultural Geography*, Shurmer-Smith (2004) states that cultural geography in practice may include all possible sensual faculties and forms of gathering and compiling knowledge: “*Doing* includes looking, feeling, thinking, playing, talking, writing, photographing, drawing, assembling, collecting, recording and filming as well as the more familiar reading and listening” (Shurmer-Smith 2002, p.4). At the same time, “*doing* means being *active*, avoiding *being done to* (passive), so any reading and listening must be critical and part of a **dialogue**” (Shurmer-Smith 2002, p.5, author’s original emphasis in italics; my emphasis in bold letters). In the context of my “cultural cartographies,” this means an active engagement and a dialogue with my study materials (historical maps, travel accounts, mental maps, interviews, etc.) and their relationship to the real landscape. As a participating observer (or even an observing participant) I do not passively read maps and texts, but I attempt to assemble the details and link them to my own knowledge of the Cariri and the present-day situation with the purpose of sharing this knowledge and trigger a broader and more active debate on regional identities in the region.

Outline of Dissertation

Apart from this introductory section and my concluding remarks, this dissertation is divided into six chapters that aim to unfold my framework for cultural cartographies and indicate ways to use it in practice.

In chapter two I will present the Cariri region and its peculiarities in different contexts. Far from being a mere description of the region, it is a reading of how regional geographies and histories are produced. The following chapter addresses the ways by which I will approach the region. I will discuss cultural and humanistic perspectives in cartography and the possible uses of maps in cultural geography. At the end of the chapter I will present a framework for these cultural cartographies that is based on four different methodologies that I will apply in the four subsequent chapters. Chapter four is a reading “between the lines” of historical and present-day regional maps that aims to reveal their “social life”, that is, the stories, contexts, and narratives behind these paper landscapes. Chapter five deals with cognitive representations of the Cariri. I will describe and analyze a substantial sample of mental maps of the region in order to obtain clues about the regional geographical imagination and cartographic culture. In the following chapter (six), I will discuss the relations between regional knowledge and cartographic representations and present “cultural maps” of the region, based on a set of interviews with regional “connoisseurs.” The final chapter draws upon my own mapping and mapmaking skills and strategies. I will convert data from a historical travel account and my own fieldtrip into graphical representations. In the final considerations of my study, I will summarize the previous chapters and compare and evaluate the cultural-cartographic methodologies that I applied to my area of study, the Cariri region.

With my dissertation, I want to show how maps (both historic and contemporary) help construct, confirm, and even conceal regional identities. In so doing, my research reveals maps as cartographic methodologies in practice: tools for insiders and outsiders to actively shape, define, and redefine a region. My qualitative study uses document analysis — of maps, regional narratives and mental maps— as well as interviews in order to show how cartographic

approaches, both from geography and cultural studies, can be complementary strategies to access regions and places and help understand different forms of cartographic culture or subculture, or even cartographies without maps.

Thus, my dissertation will contribute to the trans-disciplinary research in the cultural meanings of maps and provide an innovative proposal for a methodological framework to practice these cultural cartographies. Cartographic representations should be conceived as open-ended forms of conversation that include imagination, performance and personal experience rather than as definite and “objective” delimitations of space and knowledge. In other words, this study is

an attempt to map out the cartographic writing that emerged in the twentieth century, a writing in which the map metaphor functions to suggest not the boundedness of knowledge and the objectivity of the author-cartographer, but rather the impermanence of boundaries, and the experiential and subjective nature of understanding (Mitchell, 2008, p.xi).

At the same time, my project aims to show my concern about the relationship between cartography and culture, and seeks to provide a methodology that will establish a better dialogue between mapmakers and society, taking into account that “thinking is like making and using a map, and mapping is necessary for thought” (Matless, 1999, p.198). This said, let the mapping adventure begin.

Chapter Two: Introducing the Region Histories and Geographies of the Cariri

“Far from seeing the region as a solid terrain in which one could support the effervescence and the movement of history, [I want to] show it also as a moving ground, a swamp that stirs with history and makes it stir [and] that swallows and is swallowed by historicity”
(Albuquerque Jr., 2000, p.26, my translation).

The aim of this chapter is to present details about the area of study that I will approach through my cultural-cartographic strategies (see following chapters, especially chapter 3). I will relate details of the “shaky ground” on which the histories and geographies⁶ of the Cariri region are created, first within the context of Northeast Brazil and then according to the texts by writers of different origins, including eye-witnesses, regional lay-historians, and foreign travelers. However, my emphasis will be on a critical assessment of the processes of history- and geography-writing rather than on the reproduction of “facts” and dates as they can be found in official versions in textbooks and on the internet. This reading between the lines of regional space and time entails the search for hidden geographies and ephemeral (hi)stories that remain untold or invisible in the written and publicly accessible records and that may reveal alternative or complementary viewpoints about the region.

In this chapter, my intention is to show that studies *in* regional geography and history are also studies *of* regional geography and history, that is, the ways in which geography and history on a regional level are conceived, understood, and written. This research strategy goes beyond the listing and interpretation of regional peculiarities of mainly local or “provincial” interest and draws our attention to the genealogy of geographical and historical description, discourse, and

⁶ I use the plural forms of geography and history in order to point out that there is not only one narrative of space and time, but a wide range of parallel discourses. Despite this potential multivocality, certain visions dominate and silence others.

imagination which seeks to “consider regional origins and the interpretative and imaginative processes behind their construction” (Price, 1996, p.335).

Within this context, the British historical geographer Miles Ogborn (2004, 2005/2006) makes a plea for the study of “textual geographies or geographies of texts” (Ogborn, 2005/2006, p.149), literally tracing back geography’s meaning to its Greek roots: writing the earth. According to Ogborn (2004), more attention should be paid to the “techniques and technologies of writing in the making of geographical knowledge” (p.294) and the “textualisation of geographical understanding” (p.296). This kind of study does not only entail the forms and ways through which “space, place or landscape [are] represented within the texts, maps and images under consideration” (p.296), but also the practices and processes behind the written and material records that are impregnated by passion, power, and performance (Ogborn, 2009, p.6). On the following pages, I will present further details of the textual geographies and histories of the Cariri region.

The Northeast as a Unique Region in Brazil

Four decades ago, the Instituto Brasileiro de Geografia e Estatística (IBGE), the federal institution in Brazil that executes geographic and cartographic studies and handles the execution of the national census, divided the national territory into five major “homogeneous regions” for planning purposes and according to their main physical geographic characteristics that distinguish them from the others (IBGE, 1970). One of these regions is the Brazilian Northeast.

What is unique about this part of the country? The region contradicts the image of the humid tropics where lush rainforest vegetation abounds and an extremely humid climate dominates. A quick look at a world climate and vegetation map points in a different direction:

Northeast Brazil is the only semi-arid region in the world that is located in the proximity of the equator (about 3° to 10° S). Areas of the same latitude in Africa (with the exception of the Horn of Africa and the Peruvian coastal desert), island Asia are shown as dense green humid forests.

The dry climate of Northeast Brazil is not the result of human agency as is the case of the climate in parts of the Amazon that has changed due to commercial logging and slash-and-burn agriculture. The specific physical configuration of the Northeast (e.g. poor soil substrate from reworked Pre-Cambrian rock material) only permitted a sparse vegetation of shrub land, known as *caatinga* (“white forest”) whereas the region itself was compared to a big desert, the so-called *sertão* in Portuguese.⁷

The main image of Northeast Brazil transmitted by the media is a landscape of cacti and rachitic shrubs with occasional trees. This landscape stereotype is clumsily underlined by images of poverty-stricken Brazilians who face the harsh reality of droughts and need official help to overcome their negative human-environment interactions (Freise, 1938; Alves, 1953; Villa, 2000), whereas political and economic actors and interest groups take advantage of this calamitous situation (Coelho, 1985; Conniff, 1975; Greenfield, 2001).⁸

The Brazilian Northeast has received much attention in academic research and journalistic writing, especially owing to its rather tumultuous past and its extreme landscapes that transmitted images of violence and despair.⁹ Even so, it still represents an enigma for some geographers:

⁷ The word is a clipped form of *desertão*, meaning big desert. Originally, not only the unknown and “empty” backlands in Northeast, but generally all lands beyond the colonized Brazilian coast were considered *sertão*. The most common terms in Portuguese that I used in my dissertation are listed in a glossary in appendix II.

⁸ See also Mike Davis’s (2001, p.377-393) compelling account of the political ecology of famine during the 1877-1879 Great Drought in Northeast Brazil which he compares to a late Victorian Holocaust.

⁹ See for example Euclides da Cunha’s (1944[1902]) account of the War of Canudos in 1897 when the intervention of the Brazilian army in the activities of a messianic movement ended in bloodshed, or Josué de Castro’s (1948)

It is probably true that more has been written about Northeast Brazil than about any other area of the country, and yet, despite the depth and breadth of interest concerning that distinctive region of contrast, Northeast Brazil remains today one of the least understood parts of the national territory. Perhaps it is because it has yielded its secrets with great reluctance that social scientists have been drawn back repeatedly to try to fathom the complexities of life and livelihood there throughout more than four hundred years of recorded history (Webb, 1974, p.1).

This ambiguous image may also be due to the diversity of landscapes in the region itself that have been played down by the deliberate emphasis on more “visible” and economically more interesting places such as the sugarcane zone in colonial times and the mass tourism on the beaches of today. Manuel Correia de Andrade, one of the most prominent Brazilian geographers of the twentieth century and a native of Northeast Brazil, described the imaginative ambiguity of the region in the following way:

The Northeast is one of the most discussed, but least known, geographic regions of Brazil. According to any given author’s point of view, the Northeast is shown: as an area of drought, something that has plagued the region since the colonial period and, in periods of crisis, prompted the attention and financial support of the government; as an area of extensive sugarcane fields that enrich a half-dozen at the expense of the majority of the population; as an area essentially underdeveloped because of the low per-capita income of the inhabitants; or even as a region of libertarian revolutions... (Andrade, 1980, p.6).

Andrade mentions at least four different ideas about the Brazilian Northeast. However, there are many more conceptions of the region that go beyond Andrade’s Marxist perspective, determined by economy, politics, and development, and show that geographic divisions and regions are social constructions. In the case of the Northeast, we are dealing with “a geographic division created in history and given reality by a tradition of thought, a way of looking at things and of writing about them” (Albuquerque Jr., 2004, p.43). In this process, certain images and discourses have dominated others and become widely accepted in society as absolute truth.

critical reflections on hunger. For a more detailed bibliography about Northeast Brazil and its geographies see Ab’Saber (1999).

In the 1940s and early 1950s, the Instituto Brasileiro de Geografia e Estatística (IBGE) contributed to this image production of the Northeast when it published a series of short texts on “types and aspects” of Brazil in the leading geography journal *Revista Brasileira de Geografia*. These brief descriptions were compiled in book format several years later and translated into English and French (IBGE, 1945, 1956, 1957). On one or two pages, typical examples of material culture and characteristic topics on land and life in a particular region of the country were described and explained. For each entry, the Peruvian-born illustrator Percy Lau (1903-1972) produced an iconic fountain-pen drawing containing (agri)cultural aspects that were related to each geographic location (Daou, 2001; Angotti-Salgueiro, 2005).¹⁰ Page 57 of *Tipos e Aspectos do Brasil* (IBGE, 1956) shows a picture map of Northeast Brazil. Small drawings are squeezed into the shape of the region and evoke a peaceful and pre-modern way of life: a man sitting on the ground cracking *babaçu* nuts, another man harvesting leaves from the *carnaúba* palm in the “west”, coconut trees and fishermen’s rafts on the coast, the smoking chimney of a sugar mill and horsemen herding cattle further inland.

The almost 600,000 square miles of Northeast Brazil are generally divided into four physiographic sub-regions (Andrade, 1980, figure 2.1) with distinct modes of production. The more humid *middle north* borders the region of the Amazon and includes savannas and palm forests. The *zona da mata*, the narrow coastal strip between 5 and 18° S is the traditional colonial area for sugarcane, coconut, and cacao plantations whereas the *agreste* is a transition zone between the coast and the dry backlands where cattle raising, meat and milk production and crops such as cotton dominate. The dry backlands beyond these two zones are characterized by a less dense shrub vegetation. Livestock-raising and subsistence agriculture prevail, but larger

¹⁰ I was unable to obtain a permission to use examples of Percy Lau’s art due to an unsolved juridical battle between the Lau family and the IBGE.

irrigation projects do also exist. This is the so-called *sertão* I mentioned above, “a vast semi-arid zone reaching north from the interior of Minas Gerais and Bahia to Piauí and Maranhão on the Amazonian frontier” (Levine, 1979, p.197).

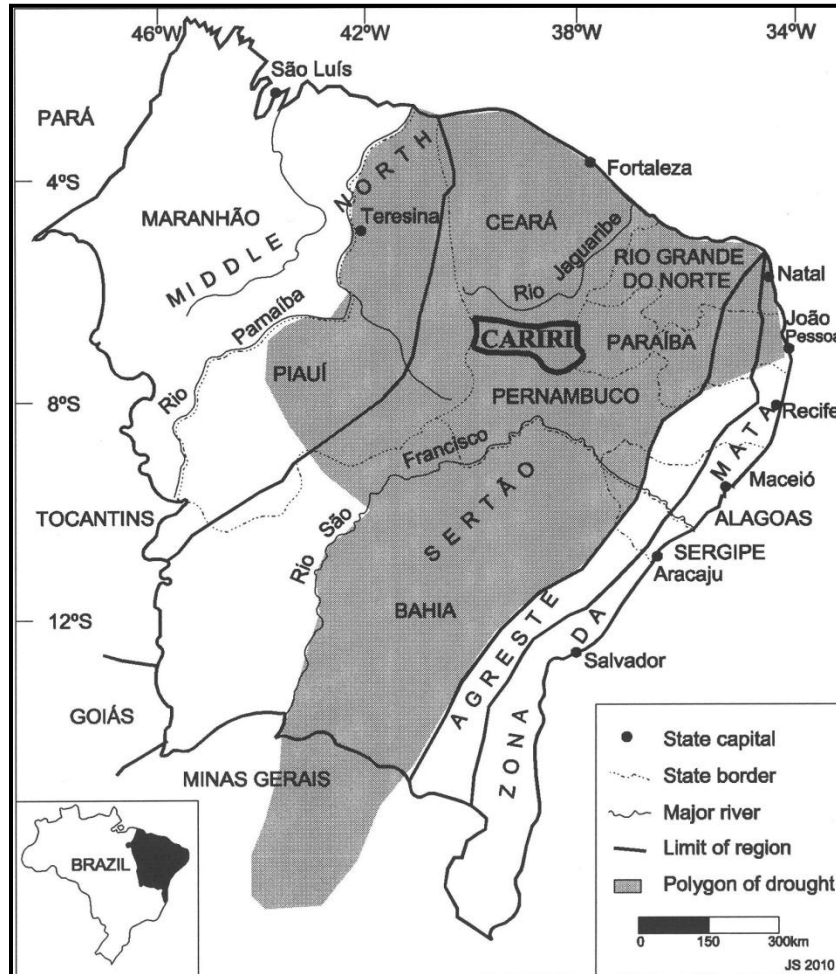


Figure 2.1: Map of Northeast Brazil showing the four geographic regions and the “polygon of drought”¹¹

The *sertão* is also associated with the “polygon of drought” (figure 2.1), an irregularly shaped area in the Northeast which periodically suffers from the impact of long and accentuated dry periods. Authors such as Marshall Eakin (1998) do not refrain from poeticizing the landscape and comparing it to the regions in the United States:

¹¹ Map based on Andrade (1980, p.15) and Rüe (1957, p.13).

Semi-arid, and plagued by long droughts, high temperatures, and poor soils, the *sertão* forms a harsh and forbidden environment. If the Northeast is the rough equivalent of the U.S. South, then the *sertão* is Brazil's Appalachia – with even more severe problems. Extended droughts have occurred every eight to fifteen years since the eighteenth century in the so-called polygon of drought. According to some accounts, as many as half a million (50 percent) of Ceará's inhabitants perished in the 1877-1879 drought. Long periods without rainfall are punctuated with sudden downpours that turn the barren backlands into lush, green fields and forests for brief periods. In the 'green hell', the tough *sertanejos* (backlanders) raise livestock, cotton, and sisal (Eakin, 1998, p.71).

The generalized image of this landscape entails sparse vegetation consisting of bony trees, cacti, and agaves whose sword-like leaves rise from a rocky, grassless ground. However, this visual stereotype is frequently taken as a synecdoche of Northeast Brazil and contradicts the diversity of landscapes in the region. In other words,

[t]he popular image of the *sertão* as inhospitable desert belies the general salubriousness of the zone, where water is to be found in oases and where general life-supporting conditions are more favorable than on much of the tropically humid coast (Levine, 1979, p.197).

The Cariri Region as a Unique Region in Northeast Brazil

The Cariri region in Ceará¹² is one of these "oases." Many authors (for example, Andrade, 1980; Petrone, 1955a; Barros, 1964) praise the almost biblical setting of the Cariri at the foothills of the humid north side of the Araripe plateau that is poetically described as green island, paradise, "gift of nature", or even God-sent, in contrast to the desolate *sertão* that surrounds the area:

The valley, always cool and always green, and its perennial water springs that gush from the foot of the mountain are like an assertion that the Cariri is a piece of terrestrial paradise while the entire Northeast is a furnace that crackles through the contact with a scorching sun (Martins Filho, 1966, p.103).

¹² In the neighboring state of Paraíba, there is another region with the same name (Webb, 1974, p.70). In pre-colonial times, the Cariri Indians migrated from Paraíba to more fertile regions such as the Cariri in Ceará since the poor soils and the dry climate did not offer any base for survival. In order to differentiate these two Cariris the former is commonly known as *Cariris Velhos* ("Old Cariris") and the latter as *Cariris Novos* ("New Cariris").

Due to this distinct natural environment, the population tends to separate itself from the neighboring dry backlands:

In the Cariri and other cool mountains there is a great contrast with the neighboring sertão. The inhabitants of these green oases in the midst of the gray desert of *caatinga* generally do not even like to be referred to as sertanejos... The contrast is determined by the presence of mountains. The Cariri area is located at the foot of the Chapada do Araripe, on the Ceará watershed, and the cool mountains are found over the portions that are highest and most exposed to the moist winds... (Andrade, 1980, p.174-175).

More geographic, but nevertheless poetic, Manuel Correia de Andrade continues his reflections and explains the reasons for the existence of this unique landscape:

The Cariri, occupying the southern portion of Ceará and bordering Pernambuco, is situated at the base of the northern slope of the Chapada do Araripe and represents a *tiny island within the dry expanses*... In fact, the moisture of the Cariri is a *gift* of the Chapada do Araripe, since the rain that falls over it, encountering a relatively flat and permeable surface, filters downward through the permeable sandstone, until it reaches an impermeable layer. A perched water table forms, and because of the slope of the beds, it flows in the direction of Ceará, where the water reaches the surface through a series of permanent springs (Andrade, 1980, p.27, my emphasis).

The favorable moisture regime, the existence of more than 300 springs originating from the plateau (Mont'Alverne et al., 1996), and the productive soils of the foothills and valleys have turned the Cariri into an "island of agriculture in the midst of the *caatinga*" (Andrade, 1980, p.27) that favored the planting of crops such as sugarcane and coffee.

History of European Exploration of the Cariri Region

The descriptions of the Cariri quoted above create powerful images of a natural landscape with inexhaustible water resources and luxuriant flora that became the favorable setting for the first European colonizers who reached the region after a long and toilsome journey through the dry backlands. Among the first Europeans to reach the region at the turn of the eighteenth

century were adventurers and gold-diggers from neighboring areas and settlers attracted by the fertile soils in the valley and the perennial water resources (Petrone, 1955a). Little is known about the original indigenous population of the Cariri (Pompeu Sobrinho, 1950) that was frequently described as “the lords of the land when the civilizers arrived” (Araújo 1973, p.18). Cattle-raising was the initial economic activity of the Europeans, before the land use changed to the cultivation of sugarcane and then beans, corn, rice, cotton and manioc.

Descriptions of the Cariri appear mainly in travel accounts from scientific expeditions and natural scientists who were less interested in culture and indigenous populations and more in natural resources such as gold, silver and other exploitable commodities.

A number of travelers left written records in which the Cariri and its physical and cultural aspects were described (for example, Feijó, 1997 [1814]; Patroni, 1836; Gardner, 1846; Freire Alemão, 2006, 2007 [1859-1860]). Among the early natural scientists is the Brazil-born geologist João da Silva Feijó (1760-1824) who visited the state of Ceará at the turn of the nineteenth century (Paiva, 1991; Lopes & Silva, 2003; Lopes et al., 2005) on a reconnaissance trip for the exploration of minerals, especially saltpeter, essential for the production of gunpowder. Three decades later, the Scottish botanist George Gardner traveled through the Cariri for his studies on the Brazilian flora. He remained in the region for more than five months and was the first to describe a distinctive local paleontological heritage (Paiva, 1993; Gardner 1846). In turn, his studies became known in the United States and the world through the Swiss-born naturalist Louis Agassiz.¹³

The *Comissão Científica de Exploração* (1859-1861) was the first Brazilian scientific commission to travel through the northeastern regions of the country in order to compose “a

¹³ Agassiz incorporated and discussed Gardner’s findings in his *Recherches sur les Poisons Fossils* (Agassiz, 1833-1843, see also Agassiz, 1841).

collection of organic and inorganic products and of all that could serve as proof of the state of civilization, industry, uses and costumes of our indigenous peoples” (Braga, 1962, p.17). The commission consisted of five specialized sections (1) botany, (2) geology and mineralogy, (3) zoology, (4) astronomy and geography, and (5) ethnography and travel narrative, each one spearheaded by a prominent scientist. The findings of this expedition were registered in numerous articles and reports, some of them still unpublished (Braga, 1962; Kury, 2001; Lopes, 1996; Porto Alegre, 2003).

In the following decades, little was written about the geography of the Cariri. The Ceará-born historian Raimundo Girão (1900-1988) described the social formation in the region as “difficult” (Girão, 1953, p.36). Due to the distance to the coast and the political decision-making, the habitants of the region had to “withdraw to their own inside, building their own happiness, only having trust in their own moral forces, conscious of and patriotic for their generous lands” (Girão, 1953, p.37). The Cariri remained an isolated spot in the backlands and supplied the *sertão* with agricultural products, especially *rapadura*, dried sugarcane juice in the form of bricks.

Unlike other areas in the Northeast, the Cariri valley did not have space for large agricultural properties. However, a wealthier oligarchy of land owners developed, and the political structure in the region did not differ much from the power relations that dominated the *sertão* and the sugarcane plantations that were determined by the *coronelismo* or “rule of the coronels” (Macedo, 1990). In the regional history-writing, there are frequent references to the tyranny of these local “potentates” and their armed skirmishes with political rivals. In addition to this, groups of *cangaceiros* (bandits) roamed the backlands and attacked travelers and towns till the 1930s (Hobsbawm, 2000) whereas the so-called “miracle of Juazeiro”(Della Cava, 1970)

triggered a popular religious movement and attracted thousands of pilgrims who decided to stay in the region, especially in Juazeiro do Norte.¹⁴ National projects for the improvement of the regional infrastructure such as the extension of the road and rail networks “contributed much to the reduction of the cultural insularity” of the Cariri (Nicholls & Paiva, 1966, p.III-17) although the highways were mere dirt roads impassable during the rainy season. Electric energy only reached the region in the end of 1961 when the transmission lines to the hydroelectric plant of Paulo Afonso several hundred miles further south were completed (Governo do Estado do Ceará, 1965).

In the beginning of the 1960s, the Cariri was selected for an international development project coordinated by the American engineer Morris Asimow from the University of California, Berkeley and partially funded by USAID and the Ford Foundation among other sponsors. The “Asimow Plan” aimed to establish industrial enterprises in the Cariri that produced material based on regional resources such as plywood, ceramics, sewing machines, cement, and derivatives of corn (IBGE, 1971, p.23). However, due to a deficient “psychological preparation” (Soares, 1968, p.36) and the lack of regional investment in technology and equipments, the pilot projects closed down after three or four years.

Today, the region’s economy is still based on subsistence agriculture, although investments in the industrial and service sectors are increasing considerably (Barros, 1964; Soares, 1968, Diniz, 1989). With its more than 500 000 inhabitants (IBGE, 2001)¹⁵, mainly

¹⁴This episode refers to an incident in 1889 when at several occasions a piece of sacramental bread turned into blood in the mouth of one of the novice nuns during Mass. The miracle was attributed to the local priest Cícero Romão Batista and consolidated Juazeiro do Norte’s fame as a major center of pilgrimage in Latin America which attracts over a million pilgrims a year (Slater, 1986).

¹⁵The population figure refers to the Cariri micro-region that includes the towns of Barbalha, Crato, Juazeiro do Norte, Santana do Cariri, Farias Brito, Jardim, Missão Velha, Nova Olinda, and Porteiras. Governmental institutions such as the IBGE and the Instituto de Pesquisa e Estratégia Econômica do Ceará (IPECE) frequently use different regional sub-divisions based on social and economic parameters.

concentrated in the three principal towns of Juazeiro do Norte, Crato and Barbalha), the Cariri region represents a great variety of regional cultural productions including dances, lace work, ceramics, poetry, theatre, and cinema (Slater, 1979, 1982a, 1982b).



Figure 2.2: Fossils on display in the museum of natural history *Casa Lima Botelho* in Jardim (photo by author)

The region is also considered to be one of the world's unique paleontological sites due to the high diversity of fossilized organisms from the Lower Cretaceous (60 to 120 million years ago) such as plants (leaves, trunks, seeds), invertebrates (mollusks, crabs, gastropods), and vertebrates (fishes, reptiles, pterosaurs and dinosaurs) in an exceptional state of preservation (Maisey ,1991; Kellner, 2002, figure 2.2).

Writing in and of the Cariri Region

Up to this point, I have provided details that have contributed to the “coming-into-being” of the Cariri region. To do this, I presented commonly known “facts” about land, life, and landscapes. In this subsection, I will take a closer look not at the “facts” themselves, but at the ways they were produced.

February 19, 1859 could be the possible date for the beginning of the systematic historical writing on the Cariri. On that day, issue number 177 of *O Araripe*, the first newspaper of the region, announced on its front page that from that date onwards, it would publish a series of articles with the title *Apontamentos para a História do Cariri* – notes on the history of the Cariri. These texts on the region’s past were printed in several parts during the succeeding months and can be considered the first attempt to write down the “fundamentals” of the history of the Cariri (figure 2.3).

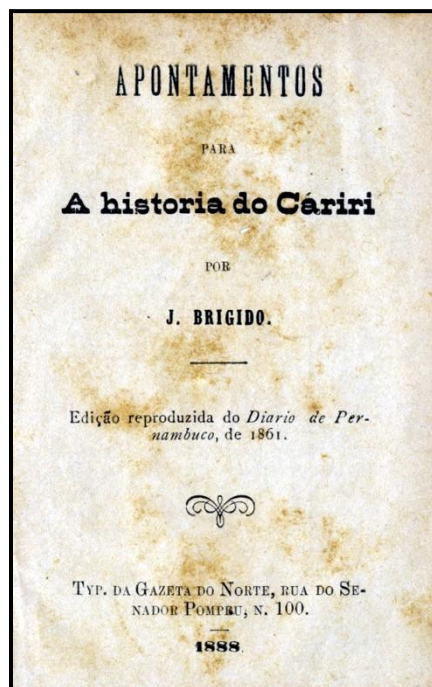


Figure 2.3: Cover page of Brígido’s *Apontamentos para a História do Cariri*¹⁶

Behind this project was the journalist and lawyer João Brígido dos Santos (1829-1921). He was born in Rio de Janeiro, but had spent much of his time in the backlands of the province of Ceará. In 1855, he founded the *Araripe* newspaper that circulated between 1855 and 1865 and

¹⁶Reproduction of book cover from facsimile edition with permission by Armando Rafael.

claimed as its mission “to sustain free ideas, protect the cause of justice and advocate the faithful observance of the law and local interests” (figure 2.4).¹⁷



Figure 2.4: Header on title page of the *Araripe* newspaper¹⁸

Brígido’s notes on the history of the Cariri were reprinted in the *Diário de Pernambuco* newspaper in Recife two years later, and it took him another 27 years to release a book edition of his “collection of facts of major interest that occurred in the south of Ceará, to be told from its discovery to the Independence movement [in 1822]” (Brígido, 2007, p.iii).

In the introduction of his treatise, Brígido announced that he himself and not the “rare cultivators of the written word in Ceará” spent two years in the archives of the judicial administration in Fortaleza where he perused a vast quantity of documents from which he was able to “rearrange the facts and align the personalities” (Brígido, 2007, p.iii).

Brígido was conscious about the quality and the contents of his sources that were only secondary material. He was not an eye-witness of the facts he was reporting:

Not writing as a witness about events whose impression we would have received, but collecting and organizing some few materials that we have found, and we have resorted to a tradition that in this country inspires little confidence (p.1).¹⁹

¹⁷ This statement was printed as a header on every issue. Depending on the financial situation and the availability of printing material, *O Araripe* was generally published biweekly. There are more than 300 published editions between 1855 and 1865. Most of the issues are available on microfilm at the Biblioteca Pública Menezes Pimentel in Fortaleza (microfilm rolls 51, 52, and 53).

¹⁸ Photo from microfilm copy on screen, Biblioteca Pública Menezes Pimentel, Fortaleza.

He knew that he was unable to present “an animated portrait of the true colors of each moment [in the history of the Cariri]” (p.1). His notes on the history of the Cariri represented his own selection of facts “that have been proved through documents” (p.2) and approved amidst “a labyrinth of incoherent pieces of information where one excludes the other” (p.2).

How did Brígido narrate the history of the Cariri? In order to chronologically present the events, he divided his account into 12 sections that recounted the “preliminaries of the history of the Cariri” (p.4-6), the “discovery of the Cariri” (p.6-22) with the arrival of the first European settlers, the occupation of the lands, the withdrawal of the Indians and the aggravating feuds between settler families (p.22-28, p.34-64), and the frustrated search for gold and other minerals in an economically feasible scale (p.28-34). The remaining two thirds of the book concentrated on two events that happened between 1817 and 1822 in the region: the 1817 Revolution and a movement for the independence of Brazil.²⁰

Brígido’s history of the Cariri ended abruptly on October 16, 1822 when “the Coronel Antônio Bezerra de Souza Menezes, from Riacho-do-Sangue [“Blood Creek”, today Jaguaretama], was entrusted with the command of arms” (p.148). No further justification is given for why his historical account terminated at that date.

As for his history-writing, Brígido’s notes about the history of the Cariri are a constant flow of selected “facts” and names based on written documents which he found in the state archives and which he patiently transcribed for his personal collection. Based on Brígido’s

¹⁹ Brígido entitled the introduction of his book as “note to the public”. Aware of the dubious quality of historical data, he invited his readers to send him their feedback in order to notify him of errors in his narrative and details that had been left out (Brígido, 2007, p.3).

²⁰ These two rebellions took place in Northeast Brazil. Whereas the former, known as “Revolution of Pernambuco”, was a frustrated attempt to win Brazil independence from Portugal, the latter was a local political revolt that preceded the official “cry of independence” by the emperor in 1822.

account and filtering out the most relevant data in the history of the Cariri, a brief one-paragraph version to summarize the region's past could be as follows:

In the beginning, an “extremely bellicose nation” (Brígido, 2007,p.5), the Cariri Indians, lived as hunters and gatherers at the foothills of the Araripe tableland, “at the margins of beautiful rivers where they enjoyed the mild climate and found countless berries” (p.5) that served as simple, but abundant food source. The Indians felt love for the paradise and fought against other hordes that tried to assail them. Early in the eighteenth century, the first Europeans arrived in the region and obtained land titles. They allied with the natives or went to war against them until the whole indigenous population was removed from the region. The settlers founded several urban nuclei where churches were built. The development in the region attracted more people from outside. There was competition and political discordance between the towns and the families of settlers. The Pernambuco Revolution of 1817 and the local movement for independence from Portugal resulted in upheavals and counter-rebellions in the region.

The text above is my own condensed rendering of the contents in Brígido's notes on the history of the Cariri region. The narration is a loose sequence of facts, names, and events that are not interconnected. The American environmental historian William Cronon (1992) labels this form of history production as a “chronological listing of events as they occurred in sequence” (Cronon, 1992, p.1351). In his reading-between-the-lines of the history-writing of the Great Plains, Cronon compares this style to the way children recount events since it “seems pretty peculiar to anyone who reads it, as if a child were trying to tell a story without quite knowing how” (p.1351). It is a listing or flow of “facts” from which the “sense of connection” (p.1351) has been removed rather than a narrative.²¹ Names and events are taken for granted, and their causality and connectivity do not become clear. Who did what for which reason? How did the settlers drive away the Indians? What did the settlers do in the region? For Brígido, the historicity of a fact was the most important dimension in his notes. “When” and “who” were the predominant interrogatory pronouns in his text. This “factual” history does not only leave the

²¹ I conceive narrative here not in the stricter sense of literary studies as a structured story with a beginning, middle, and end but rather in its original meaning in Latin. The verb *narrare* could mean to tell, relate, report, recount, set forth, simply say, or speak (Andrews, 1907, p.1186-1187).

episodes in the history of the Cariri as free-floating incidents, but also strips the events of their meaningfulness. As Cronon affirms,

[w]e have trouble sorting out why things happened when and how they did, and it becomes hard to evaluate the relative significance of events. Things seem less *connected* to each other, and it becomes unclear how all this stuff relates to us (Cronon, 1992, p.1351, emphasis in original).

The historian Hayden White (1980, p.11) classifies this history-writing as similar to the structure of medieval annals in which “events [were] ordered vertically as a file of annual markers” (p.11). The authors of these texts failed “to see that historical events dispose themselves to the percipient eye as ‘stories’ *waiting to be told*, waiting to be narrated” (White, 1980, p.11, emphasis in original). To make his point clear, White presents an excerpt from the *Monumenta Germaniae Historica* that refers to “facts” in German history such as harsh weather conditions (floods and droughts) and the battles of the Frankish military leader Charles Martel during the period between AD 709 and AD 734. Similar to the history of the Cariri, the text example presents data, but does not explain them:

Why ‘Charles fought against the Saxons’ remains as unexplained as *why* one year yielded ‘great crops’ and another produced ‘flood[s] everywhere’. Social events are apparently as incomprehensible as natural events. They seem to have the same order of importance or unimportance. They seem merely to have *occurred*, and their importance seems to be indistinguishable from the fact that they were recorded. In fact, it seems that their importance consists of nothing other than the fact that they were recorded (White, 1980, p.12, emphasis in original).

Is Brígido’s history writing of the Cariri typical or only an exception? What is “wrong” with this kind of writing? The German anthropologist Peter Schröder (2000) got straight to the point. In his annotated bibliography on culture and society in the Cariri, he found 244 reference sources to the region ranging from folkloric studies and testimonies of religious devotion to the regional unofficial saint Padre Cícero to regional planning and politics. Schröder drew the conclusion that this regional historiography is “very conservative and unsatisfactory”. The

history of the Cariri resembles an “official political and administrative history” that leaves out social, cultural and economic processes. For Schröder,

the historiography of the Cariri deserves to be branded, with a few exceptions, as boring because it is not alive and does not seem to recognize narrative plots. Not rarely does it merely consist of name lists with some commentaries. What kind of image does one transmit through this? None. In many cases, the history that is presented [in the publications] is only the history of the families of important landowners; the intention of the authors is primarily to praise their own families or flatter the families of their friends (Schröder, 2000, no page number).

The main characteristic of the history-writing in the region is its inwardness. History is written for “internal use” and fails to be appealing for people who do not find themselves in the narratives. For the non-involved the texts appear as an endless recital of unconnected facts and events that are presented as absolute truth. The written word serves to prove and consolidate the facts of the past.

The writers of regional history, most of them local intellectuals and lay historians, generally initiated their studies with what was most familiar to them. As a result of this, “immense lists” with the names of the families that settled in the region were produced:

Mayors of the towns, county court judges, notable citizens from the town of Crato who live in other cities; clergymen, officials from the armed forces, medical doctors, dental surgeons; pharmacists, bachelors of law and even adoptive sons of Crato [outsiders who turned natives] who have elevated the town’s name (Marques, 2004, p.52).²²

The search for the region’s origins became a particular challenge for the local scholars who endeavored to solve the “truly difficult but deserving undertaking of seeking to dissipate the mists that involve the origins of the gens [Latin for nation, family, people] from the Cariri” (Macedo, 1985, p.39).As a result of this quest, these writers became obsessed with facts, dates,

²² The Cariri and the town of Crato were frequently used as synonyms in the writings due to the fact that Crato had been the overarching political and economic center of the region for a long time before Crato’s former district Juazeiro do Norte developed into the main regional pole. Other places that had “less” to offer and no official guardians of their history-writing remained in the background.

and names that they found in colonial documents and official church registries.²³ For example, Joaryvar Macedo (1985) produced a book in which he lists the names of 2,671 settlers, in alphabetical order and according to their provenience, who arrived in the region during the eighteenth century and were “all founders or consolidators of the early human nuclei and legitimately responsible for the historical formation of the valley” (Macedo, 1985, p.275).²⁴ For writers such as Marques (2004), this kind of history writing was not an attempt to reconstruct the past, but to reconfirm the social structures of the present:

It becomes evident that it is not the brumes of the past that [this author] tries to dissipate here, but it is a search for the nobility of one’s ancestry. It is not the ancient village with its mud huts that one seeks to identify, but the nobility of the families from the present which are eager to keep alive [their names] till the days to come (Marques, 2004, p.53).

Who makes history for whom? In Brígido’s defense, it must be mentioned that he had to base his history of the Cariri mainly on official material such as correspondence that he found in the provincial archives.²⁵ These documents were instruments of decisions or protests so that his history-writing became defined by names, and not by the peculiarities of places.

Postcolonial scholars may be quick to read the past through the lens of the present and point out hidden power structures in these writings. The regional authors used their skills to narrate *their own (hi)story* that, consciously or not, served to build a historical meta-narrative with its consolidated foundation myths that did not leave any doubts about how the Cariri came into being and how the facts had to be read.

²³ These studies are restricted to the archives and give little attention to other sources such as oral history and personal correspondence, or to thematic issues such as cultural or environmental history.

²⁴ Macedo’s example shows that these regional studies were very detailed and time-consuming. Lóssio (1986), for example, mentions that his research on regional history cost him forty years of his life during which “I anticipated myself to where my spirit as an investigator could reach . . . , including the burning of my eyelashes when I read the books of others, which was also a nightmare” (Lóssio, 1986, p.3).

²⁵ Brígido only mentions two oral sources in his study: two elderly people, a school teacher and a captain-major, who retold the history of their families in the region.

Another example is Irineu Pinheiro, a local medical doctor and passionate lay historian, who recorded numerous “ephemerides” that occurred in the region from around 1700 to 1953 and that he considered noteworthy. His main concern was the knowledge of regional historical facts and their tradition.²⁶ In the prologue of his book *Efemérides do Cariri*, Pinheiro (1963) confessed that his publication was

an expression of my love for the region where I was born, [that I hope] may raise the desire in our youths to become more familiar with the past of [the state of] Ceará as a colony, empire, and republic.... It is true that by examining the times of yore and meditating upon those [times], we will understand better the present and more certainly we will have an orientation for the future (Pinheiro, 1963, p.33).

The viewpoint of local writers such as Pinheiro (1963), Macedo (1985), and Brígido (2007) is a telluric, almost patriotic manifesto for the region, mainly based on written records.

Their history-writing appears like a smooth, coherent, and continuous chain of events that

hides the discontinuities, ellipses, and contradictory experiences that would undermine the intended meaning of its story. Whatever its overt purpose, it cannot avoid a covert exercise of power: it inevitably sanctions some voices while silencing others. A powerful narrative reconstructs common sense to make the contingent seem determined and the artificial seem natural (Cronon, 1992, p.1349-1350).

Knowing about the voices that are heard in the history-writing, what are the silences?

Hidden Voices

One more time, Schröder (2000) gets to the point when he critiques the lacunae in the regional history:

One can only read little about what happened to the Indians, the original owners of the region, about the social formation of the regional population or about traditional economic activities besides the production of sugarcane and sugar. As for the Indians, at least one knows a little bit more [about them] than about the

²⁶Tradition in the sense of its original Latin meaning from the verb *tradere* – to hand down or transmit to posterity, relate, narrate, recount (Andrews, 1907, p.1884).

population of African origin, [it is] as if there had never been any form of African slavery in the Cariri and as if Afro-Brazilians did not exist in the region. Where is the other Cariri that one knows existed and still exists (Schröder, 2000, no page number)?

In the many publications on the history of the Cariri, the same details repeat themselves frequently. The original indigenous population is described as fierce and brave. The Indians fought “courageously” and “lost” their lands to the white settlers after a long time of resistance. Among the numerous ethnic groups, the “regional Indians” were frequently portrayed as stronger, “better” and more fearless than the tribes in other places (Pinheiro, 1950, 1963; Figueiredo Filho, 1964):

Maybe it was the Cariri Indians, among the forest dwellers of Brazil, who opposed themselves to the white invaders in the most courageous way. In order to tame them it was necessary to have men come from many different parts, from the north to the south, who used violence, astuteness and betrayal. The Cariris were brave and fearless to the point of risking their lives in moments of extreme audacity and cold blood (Pinheiro, 1963, no page number).²⁷

The Brazilian historian Capistrano de Abreu (1853-1927) described the contact between the indigenous population and the Europeans as a brutal battle in which the Indians finally receded, leaving an empty space to be occupied by the colonists:

In their penetration of the *sertão*, [the pioneers] came face to face with the Indians, among them the Cariris, the ancient rulers of the coast.... Their resistance was terrible, maybe the most persistent that the settlers had encountered in the entire country (Abreu, 1960, p.68-69).

Abreu continued his narrative mentioning that in the first decades of the eighteenth century, the European colonists were able to “pacify” the Indians who “left a large area free in which countless cattle ranches spread” (Abreu, 1960, p.69).

²⁷ The American anthropologist Rob Lowie also emphasized the degree of civilization of the Cariris whom he described as

on a higher level of culture than most eastern Brazilians. They grew manioc, maize, beans, and cotton; slept in hammocks; made pottery molded at the base and coiled above.... These Indians were not cannibals. Their weapons included bows, arrows, and spears, but not war clubs (Lowie, 1963, p.558).

The representation of the Cariri Indians frequently had an almost compassionate tone that called forth the romantic vision of the noble savage. For example, Pinheiro named the natives “our indigenous grandfathers” for whom “the contact with the civilized man to whom they had to submit themselves ‘for good or bad’ was fatal” (Pinheiro, 1950, p.10).

The virtues of this “big indolent and restless race.... dark, tall, robust, adorned with black feathers, grim and melancholic” (Barroso, 1962, p.56) were exhaustively praised, both for their courage and their high cultural level.²⁸ However, civilization and its martial technologies would have the upper hand in this dispute:

their fate in the face of the invaders had been sealed, and their instinctive courageousness would not be enough to defeat with bows and arrows the sagacious intelligence of gun powder, lead bullets, and the superior culture of the Europeans (Barroso, 1962, p. 60-61).

The last official references to the existence of indigenous groups in the Cariri region were made in the second half of the nineteenth century by the provincial government in its correspondence to the Ministry of Agriculture, Commerce, and Public Works. In a letter dated February 2, 1869 (neither author nor receiver are mentioned), the text blandly stated that “the few remaining Indians in this province got mixed up with the general mass of the civilized population” (Porto Alegre, Mariz & Dantas, 1994, p.92). However, the author mentioned that in a place called Cachorra Morta (“dead female dog”) in the town of Milagres there was still a group of “eleven tame Indians gathered in a settlement” (Porto Alegre, Mariz & Dantas, 1994, p.94).²⁹

²⁸ Based on the archaeological findings of artifacts such as ceramics, tools made of stone or bone and on linguistic analysis, Pompeu Sobrinho (1950, p.317-318) drew the conclusion that the Cariri Indians had “a well-developed Mesolithic or Neolithic culture that could not be mistaken for the culture of the more primitive peoples that spread throughout the Brazilian Northeast.”

²⁹ In subsequent years, several official letters were dispatched which contained the same sentence of the description of the status quo of the remaining Indians in the Cariri. The last one in the collection of the public archives of Ceará (APEC) is dated March 3, 1875.

As for the regional population of African origin, that is, the enslaved people who were brought from Africa to Brazil in order to toil on the sugarcane plantations in the Cariri region, more details can be found in written form. The local newspaper *O Araripe* - already mentioned above in the context of João Brígido's notes on the history of the Cariri - published not only articles on local events, trends and news about politics in the capital cities of Fortaleza, and columns with commentaries and personal opinions. Squeezed between these features, occasional police reports and ads appeared in the paper that could provide further details about what people were doing in the region in the mid-1800s.³⁰ I have selected several examples from the newspaper in order to provide details about slavery and how enslaved people were described and treated in the region.³¹

This way, one can read in the edition of January 16, 1858³² that a certain Mr. Lúcio Aurélio Brígido dos Santos from Barbalha wanted to buy slaves for his farm: "I will buy slaves in good shape and pay more than 1:000:000 RS [milréis] to those who own them or want to sell them". Not much is known about how enslaved people lived on the local sugarcane plantations, but the *Araripe* newspaper included frequent ads about runaway slaves. For example, on January 13, 1858 the 23-year-old slave Ernesto disappeared,

tall, shapely, without sign of a beard, big eyes and nose; he has a crooked leg that makes him bowlegged; he wears a blue cotton shirt and cotton shorts, a leather

³⁰ My inspiration was the Brazilian sociologist Gilberto Freyre (1900-1987) who in the 1930s used the classified sections of a newspaper in order to obtain details about slaves in Northeast Brazil and how they were aesthetically evaluated by the colonial slaveholders (Freyre, 1936).

³¹ I have limited myself to a few examples, since a thorough and systematic analysis of the complete newspaper collection would be beyond the scope of this research. It should also be mentioned that slavery in Brazil was only abolished legally in 1888. For details on slavery in the Cariri region, especially in the town of Crato, see Reis Jr. (2008).

³² *O Araripe*, n.126, January 16, 1858, p.4, microfilm roll 52, Biblioteca Pública Menezes Pimentel, Fortaleza.

hat; whoever catches him, should bring him back to his owner and will be well rewarded.³³

Other ads show that slaves were not stationary, but had changed their owners multiple times. We can read about someone with the name Luiz Telles, “brown, dark; 40 years or older” escaped on April 4, 1857 from a small property in São Cristóvão (Rio de Janeiro) and was probably hiding somewhere in Northeast Brazil. However, it is doubtful if the enslaved person had ever been found through the description of his features that were published in the newspaper:

bad-looking and lack of frontal teeth, a crinkled forehead; he walks in a hurry and with short steps; sometimes he pretends to be crazy, his voice is tremulous with an air of damage; he is very cunning and astute.³⁴

In other cases, these descriptions reveal that enslaved persons were also chained and whipped, as it was the case with “the slave Luis, black, 42 years of age, a little bit fat-bodied, regular eyes, white teeth” who

has many whip marks on his back and chain marks on his legs; observes much, knows how to read, write and count; in the profession of a shoemaker, ... he always walks around wearing shiny boots, a banded hat, plays *capoeira* and never takes away the cigarette from his mouth³⁵

Examples like the cases described above can be found in almost all the issues of the Araripe newspaper and provide historical details that the official history-writing has left out.

Geographies of the Cariri Region

The geography of the region in the writings about the Cariri remains second to the narration of regional history. The geographical setting merely serves as a “stage space”, that is, “a space that tends to be perceived as a static and neutral category, a pre-political object, and

³³O Araripe, n.126, January 16, 1858, p.4, microfilm roll 52, Biblioteca Pública Menezes Pimentel, Fortaleza.

³⁴O Araripe, n.166, October 30, 1858, p.4, microfilm roll 52, Biblioteca Pública Menezes Pimentel, Fortaleza.

³⁵O Araripe, n.300, February 20, 1864, p.4, microfilm roll 53, Biblioteca Pública Menezes Pimentel, Fortaleza.

little more than a passive stage upon which historical subjects play assigned roles” (Craib, 2004, p.3). The backlands of Northeast Brazil were not on the main travel route. Only few adventurers, fugitives and explorers breached the uncertainties of the shrubby backland, even fewer registered their impressions in travel accounts. The Scottish botanist George Gardner can be considered one of the main sources to provide details on the landscapes of the Cariri in the early nineteenth century. Gardner spent about five months in the region between 1838 and 1839. On his arrival in the region, he expressed his admiration for the visual beauty before his eyes – as did other travelers after him, even from the twentieth century (for example, Petrone, 1955a; Nicholls & Miller, 1966; Anderson, 1970). Gardner’s poetics of space stressed the unique character of the Cariri region:

It is impossible to express the delight I experienced on entering this comparatively rich and smiling district, after a ride of more than three hundred miles through a country which at that season was little better than a desert; the evening was one of the most beautiful I ever remember to have seen, the sun was setting in great splendour behind the Serra de Araripe, a long range of hills about a league to the westward of the Villa, but the freshness of this region seemed to deprive its rays of that burning heat which shortly before sunset is so oppressive to the traveller in the lower country. The beauty of the night, the cool and reviving feeling of the atmosphere, and the richness of the landscape, so different from what I had lately seen, all tended to produce a buoyancy of spirit such as only the lover of nature can experience, and which I vainly wished might prove enduring, as I felt not only at ease with myself, but “at peace with all below” (Gardner, 1846, p.182-183).

The number of accounts on the regional geography by outside scholars in the period after the scientific expeditions in the 1860s till the 1960s can be counted on the fingers of one hand (Petrone, 1955a, 1955b; Barros, 1964; Soares, 1968). Most of these researchers expressed their fascination with the unique regional landscape and focused mainly on regional economic development, agriculture, and industry, and how to update or upgrade the existing strategies and techniques in the region. Douracy Soares’s (1968) slim volume on regional geography can be considered the only detailed publication on space and place in the Cariri. “Replying to a request

from the Philosophical Faculty of Crato” (Soares, 1968, p.2), the professor from the Federal University of Bahia (UFBA) visited the Cariri region to teach a seminar in cartography and accompany local students on their “didactic excursions” (p.2). The result of this collaboration was the publication of his studies in regional geography, containing chapters on regional physical geography, history, urban and rural life, economic activities, and nine hand-drawn cartograms representing a wide range of topics from aridity indexes and geology to demographic development and town plans of Crato and Juazeiro do Norte.³⁶

In the following decades governmental organs integrated the geography of the Cariri into the debate on regional development on a national scale that aimed to challenge the social and economic disparities in the country, especially in Northeast Brazil (IBGE, 1971; Diniz, 1989). However, these initiatives have not resulted in the writing of “new geographies” of the region.

Re-Writing Regional Geographies and Histories

This chapter is a critical assessment of the different (and possible) geographies and histories of the Cariri. There is no “better” or “worse” form of (re)presenting the region. Lengthy name lists, poetic landscape descriptions, and personal travel accounts are not necessarily “ideal” ways of narration. However, when compared and complemented, they contribute to the (re)construction of the regional past and present as a place of multilocality and multivocality (Rodman, 1992). Multiple perspectives must be taken into account to understand the historical

³⁶ Today, Douracy Soares’s study does not receive the same attention it earned 42 years ago. The contents have never been updated, corrected, or complemented, whereas only a single copy of his publication – dirty and with torn pages – can be found in the library of the Universidade Regional do Cariri.

and geographical processes in the Cariri that go beyond the history of facts, persons, and stereotyped images³⁷ that result in

the simple description of Brazil [and its different regions] as a set of timeless landscapes [that] gives way to a genealogical vision of the different areas of the country and their populations, more precisely their ‘elites’. The oligarchic and provincial narrator emerges who specializes in how to write, starting with the history of the provinces and the dominant kinfolk (Albuquerque Jr., 2001, p.51-52).

However, there are several factors that hamper a pluralism of visions in the Cariri region. First, much of the history-writing is based on official documents found in dusty archives. Who would be interested in episodes of regional life when the reader is not able to find a personal meaning in the data and link the geographies and histories of the Cariri to a far broader context beyond the regional boundaries? The authors of the main oeuvres about the regional history (Brígido, 2007; Pinheiro, 1950, 1963; Figueiredo Filho, 1964; Gomes, 1973) followed the classical tradition of history-writing by simply listing facts, names, and dates and creating a database for “internal use only”. The history of history-writing in the Cariri does not resemble an evolution or a sequence of revolutions, but an “involution”, that is, a history that turns towards itself and is an act of enfolding, entangling, and “involving”, not of unfolding, untangling, and evolving. How can we render this knowledge accessible and interesting to someone without any attachment to the region?

It would be wrong to say that the geographies and histories of the Cariri region continue in the “brumes” of the past. Table 2.1 shows a selection of cultural productions (writing, movies, and music) that have been published by regional authors in the last three decades.

³⁷ Clichéd writing and over-generalized statements can also be produced by outsiders. The brief description of the region that I found in the 51st edition of the *South American Handbook* may serve as an extreme anecdotal example: “Here a left turn leads to the twin towns of Crato and Juazeiro do Norte (Ceará), oases of green in the dry sertão. Mosquitos (sic) can be a problem at night” (Brooks, 1975, p.259). How many travelers may have avoided the region due to the mosquito problem? The same text remained unchanged in some of the following editions.

Table 2.1: Cultural productions about the Cariri region from the last three decades (selection)

Type	Author	Date	Title	Content
Writing	Lindemberg Aquino	1969+ 1999	<i>Roteiro biográfico das ruas do Crato</i>	Guide to the street names of the town of Crato
	Waldemar Arraes	2007	<i>Crato, Evolução Urbana e arquitetura de 1740 a 1960</i>	History and architectural history of the town of Crato
Writing	Raimundo Oliveira Borges	1983+ 2009	<i>Serra de São Pedro: Município de Caririáçu</i>	Historical accounts of towns, administration, regional personalities, and intellectual life, based on personal reminiscences
		1988	<i>Memórias (fragmentos de minha vida)</i>	
		1995	<i>O Crato intelectual : dados bio-bibliográficos</i>	
		1997	<i>Memória Histórica da Comarca do Crato</i>	
		1998 2007	<i>O coronel Belém do Crato</i> <i>Reminiscências: O meu itinerário</i>	
	Amarilio Carvalho	2007	<i>Rabisco e rebuscados</i>	Stories, opinions and personal memories of his life in the town of Crato
	Roberto Marques	2004	<i>Contracultura, Tradição e Oralidade- (re)inventando o sertão nordestino na década de 70</i>	Study of the counterculture movement in the Cariri in the 1970s
	Napoleão Tavares Neves	1997	<i>Cariri: ninho da história regional, berço de heróis, de mártires e de santos</i>	Studies of regional and local history
2000		<i>Primeiro Templo Católico do Cariri e outros registros históricos</i>		
2000		<i>Barbalha Cultural</i>		
Jurandy Temóteo	1982	<i>Guia Turístico do Crato</i>	Tourist guides to the town of Crato and the region; monograph on one of the best known woodcut artists in the region	
	1990	<i>Guia Turístico do Sul do Ceará</i>		
	2005	<i>Walderêdo Gonçalves no contexto da Cultura popular do Cariri</i>		

table 2.1 continued

Cinema	Jefferson de Albuquerque, Jr.	1979 1981 1984 2009	<i>Dona Ciça do Barro Cru</i> <i>Músicos camponeses</i> <i>Patativa do Assaré – Um Poeta do povo</i> <i>Como foi, Como será a Chapada do Araripe?</i>	Documentaries about popular culture and the Araripe Plateau
Cinema	Francisco Jackson Bantim (<i>Bola</i>)	1999 2006? 2008	<i>Patativa do Assaré – Um poeta Camponês</i> <i>Assombrações do Cariri</i> <i>As sete almas santas vaqueiras</i>	Documentaries about popular culture and one full-length movie on regional myths
Music	Abidorol Jamararu	1986 1998 2008	<i>Avallon</i> <i>O Peixe</i> <i>Bárbara</i>	Critical approach to regional themes (politics, popular culture, ecology)

Most of the books have only a regional, or even a local outreach. Among the topics are personal memories, accounts on regional personalities and events, opinions on current issues in daily, life, reflections on popular culture, poetry, etc. Besides these printed and recorded materials, new internet-based forms of writing and reading histories and geographies of the Cariri have been introduced to the region. In recent years, several blogs have emerged on the internet that have turned into forums to discuss regional facts and fictions and have created a network of regional blogs that deal with a wide range of topics from comments on regional historical facts, reminiscences from the past or propaganda for cultural events to political debates, anecdotes, jokes or news of broader interest.³⁸

In the opening paragraphs of this chapter I have seconded Miles Ogborn's (2004, 2005/2006, 2009) plea for "geographies of text". In the case of the Cariri region, I came to the

³⁸ On the websites, anyone can subscribe or ask to be included as a blogger. The "Blog do Crato" (<http://blogdoocrato.blogspot.com>) can be considered the pioneer site in this network (created in June 2005). Among many other blogs, I would like to mention the following:

Cariri Agora (<http://caririag.blogspot.com>)
 Cariricaturas (<http://cariricaturas.blogspot.com>)
 CaririCult (<http://cariricult.blogspot.com>)
 Olhares do Cariri (<http://www.olharesdocariri.blogspot.com>)
 Coletivo Camaradas (<http://coletivocamaradas.blogspot.com>).

conclusion that words would not be sufficient to approach and understand the Cariri, even if I revealed the “power, passion, and performance” behind these texts. The written material based on official historical sources only poorly reproduced the unique landscapes of the region. History has overruled geography in the Cariri. In order to give life to these “dead” facts, Ogborn suggested a further investigation of the practices and processes of this writing so that the reader could find hints to how a local historian or a traveling naturalist recorded their findings and why they performed their study in a particular way. However, the text as a source has its limitations. Marie Price affirms that novelists, painters, and cinematographers could create “regional images” far more powerful than words because they are “more deeply [connected] with the everyday experience of place, [whereas] complex renderings tack between written texts, the visual landscape, and patterns of human circulation and attachment to place –all of which embody the geographical imagination” (Price, 1996, p.337).

Maybe the history- and geography-writing of and in the Cariri has lacked this geographical imagination that could turn a place or a region into a visual experience. Price (1996, p.337) claims that many regional constructions begin with maps that “solidify” the area through the “enhancement” by texts. However, in the Cariri the opposite has happened: a history-writing with few references to places did not create a spatial image. The regional geographies remained hidden and unexplored.

For this reason, the aim of my dissertation is to propose strategies to bring to light these hidden histories and geographies. Within this context, maps as visual and material subsidies should occupy a central position. My argument is that the mapping of a region such as the Cariri could be a valuable contribution to geographical fieldwork and analysis. These “cultural

cartographies” aim to go beyond the words and the conventional cartographic terms and will be explained in the following chapter.

Chapter Three: Theories and Methodologies A Framework for Cultural Cartographies

“Writing with maps works best if the scholar learns to think spatially and to use maps at all stages of research, not just while writing. Mapping, after all, is not solely a medium for communication, but is also a tool of analysis and discovery. So if we want to optimize our use of maps and to gain whatever insights they may hold for us or our readers, we need consciously to search for maps while researching in the archives or conducting interviews, or to annotate them while observing subjects’ behavior or studying our data. Maps work best for organizing information if we condition ourselves to look for information worth mapping” (Monmonier, 1993, p.12-13).

In the previous chapter I have presented geographical and historical peculiarities of the Cariri region in Northeast Brazil which I have selected as the “open-air laboratory” for my research in cultural geography. My intention was to point out that we can “do” different regional geographies that perfectly fit in the recent debates in cultural geography. In the last two decades new approaches to regional geography have led to a less static and more human-centered idea of the term region. Debates on “words and worlds” (Paasi, 2000), regional constructs and identities (Murphy, 1991), and “problems of narrative” (Sayer, 1989) have shown that human agency and culture in its material and symbolic forms could contribute to the shaping of a region and vice-versa, be it on the map or in the mind.

However, the question of how to “map” and represent a region, and reveal its cultures, identities and ways of thinking is a rather neglected problem. From a geographic perspective, culture regions do not have fixed boundaries, but instead exist as areas of “elusive societies” in the imagination of the researcher (Lewis, 1991). In addition to this, cartographic representations are frequently restricted to simple location maps of cultural artifacts and their diffusion and do not explore the full potential of maps as forms of expression and communication. Maps are still widely overlooked in the cultural geographer’s research practice and craftsmanship (Perkins,

2003, 2004). This lack of “mapmindedness” (Wright, 1943) is summarized in the opening quote for this chapter in which Mark Monmonier invites the geographers to think more spatially and use maps in all stages of their research. Maps are not only the “first and last frontier of communication (Zelinsky, 1973), but they also help us to discover and interpret space and place.

My aim in this chapter is to present a map-oriented approach to regional geography within a wider cultural geographic setting in which I will propose a set of research strategies that I label as “cultural cartographies”. My main argument is that a methodological framework that combines culture and maps could be a new and promising strategy to renew regional cultural geography and bring back the region to the new cultural geography.

For this task, I will briefly present details about the recent cultural turn in cartography and the cartographic turn in cultural geography and present a methodological framework for these “cultural cartographies” that will accompany the reader through the following four empirical chapters.

Changing Cartographic Vistas

In the last three decades, alternative perspectives in cartography have emerged that have conceived maps and the mapping processes as human actions, introduced relativistic and cultural viewpoints to the debate and challenged the objectivity of the cartographic science.

The late David Woodward (2001) identified a friction between “two cultures of map history” that can be applied to cartography in general.³⁹ He illustrated the separation of body and space in scientific cartography through an example from his own personal experience when he mulled over the death of one of his students in an accident in the snowfields of the Denali

³⁹ In his text, Woodward alluded to C.P. Snow’s (1960) influential lecture on the communication gap between science and humanities See Gould (2004) for a critical assessment to the conception of “two cultures” and its biases.

National Park. Woodward looked at a map of the region and concluded that “the map I had shown my students now seemed flat and lifeless. From it, I had formed an image of a static, benign, and romantic mountain that had no moods” (p.65). He realized that he had a “sanitized” idea of the mountains: “The map gave no clue of the howling winds, zero visibility, and numbing cold for which these mountains are famous. It gave no clue of the unpredictability of mountain’s events” (p.65). Woodward made a plea for a context-related mapping that “reintegrates the qualitative or humanistic tradition” into the scientific frame:

If maps are defined only in terms of the measured accuracy of longitude and latitude, it reduces mapping to a mathematical activity (a conformal mapping in a geometrical or an engineering sense) and ignores the possibility that mapping could be a cultural activity. There is great danger in the quest for precision without contextual meaning. You may know your longitude and latitude to the nearest hundred meters, but if you cannot relate this to your surroundings, you will never find your way home (Woodward, 2001, p.66).

The geographer Denis Wood provides another example for the humanization trend in and of cartography (Wood, 1973). He has criticized absolutist attitudes in science in general and in cartography in particular since the mid-1970s, (Wood, 1977, 1978a, 1978b) and made a plea for a “cartography of reality” of a phenomenological nature that “cannot be based on unsuspected and unsupportable abstractions of the *n*th degree but must be rooted in palpable daily human experience” (Wood, 1978b, p.207). As a method, this conception of cartography emphasizes individual perceptions and the ways these can be translated into “two-dimensional graphic forms” (p.217).⁴⁰

In the 1980s, Janos Szegö (1987) used the term “human cartography” to emphasize a different type of human agency that does not correspond to the conventional approach in cartography with its focus on land, “even if there has been a human aspect in the mapping of

⁴⁰ Wood (1978a) illustrates his ideas through numerous graphic examples such as the itinerary from home to work based on travel time, and not on distance, or the purchase of a rug that changes its size in the perception of a young couple when they spread it out in their living room. I have also done my own experiments with Wood’s cartography of reality (Seemann, 2003a).

landownership or the navigability of the terrain for armies of men” (Dorling, 1998, p.282). For him,

human cartography ... concentrates in the human experience of space and portrays the human encounters with ‘reality’, rejecting the view that behavior (and, therefore, features such as population distribution and the location of industrial activity) is governed so totally by the framework of the earth and the ‘tyranny of distance’ (Dorling, 1998, p.282).

Szegö’s main concern was with the conversion of human agency into cartographic representations: “How can actual events and processes in the world be translated into maps, and how can this translation be made comprehensible and accessible for the human brain [so that we could] create maps *about people for people*” (Szegö, 1987, p.10)?

The British geographer and historian of cartography John Brian Harley can be considered one of the most prominent scholars who has contributed to the introduction of new cultural perspectives on maps that were based on a heavier philosophical underpinning (Edney, 2003). Influenced by the iconographic studies of the art historian Erwin Panofsky (1939, 1955), Harley initially approached the history of cartography by making use of a three-level methodology of map-image understanding (Blakemore & Harley, 1980; also Harley, 1988b), before he shifted to more critical approaches, replacing his iconographic approach with elements of critical social theory, inspired by Foucault and Derrida (Harley, 1989). Maps are cultural texts that can be deconstructed (p.7) whereas “power is exerted *on* cartography” (p.12, original emphasis) and “exercised *with* cartography” (p.12, original emphasis).

These postmodern and poststructuralist influences led Harley to a more critical reading of maps which he did not conceive as naïve documents, mirrors or transparent windows on the world, but as multivocal texts (Harley, 1990b).⁴¹ Maps are not facts that speak for themselves.

⁴¹ For a critique of Harley’s postmodern approach, see Belyea (1992).

They have to be understood from within the context of the society in which they were produced, whereas “locating human actions in space remains the greatest intellectual achievement of the map as a form of knowledge” (Harley, 1990b, p.4): “Maps are perspectives on the world at the time of their making” (Harley, 1988a, p.71) and actions or processes rather than impassive descriptions (Rundstrom, 1989, 1990, 1993).⁴²

According to these ideas, the challenge for the cartographer would consist of reading “between the lines of the images” in order to “tease out new meanings, hidden agendas, and contrasting world views” (Harley, 1990b, p.4). Inspired by Raymond Williams’ (1982) writings on culture, Harley defined maps as “signifying systems” through which a social order is communicated, reproduced, experienced, and explored. Side by side with paintings, prints, theater and music, maps were seen as “nonverbal sign systems” whose graphic language had to be decoded (Harley, 1990b, p.4). In a broader sense, cartography can be conceived of as a cultural system whose

semiotics must move beyond the consideration of signs as means of communication, code to be deciphered, to a consideration of them as modes of thought, idiom to be interpreted, [leading to] a new diagnostics, a science which can determine the meaning of things for the life that surrounds us (Geertz, 1976, p.1499).

Harley (1990b, p.12) compares maps to “visual metaphors for values, enshrined in the places they represent”. In allusion to Geertz’ interpretive anthropology, this metaphorical discourse is “as thick as any written text” (Harley, 1990b, p.12). In other words, maps do not *describe* the world, but rather *redescribe* it “in terms of relations of power and of cultural practices, preferences and priorities” (Harley, 1990b, p.4). Map reading involves both the visible

⁴² Many geographers still conceive maps as mere material products and representations and not as processes and performances. Maps do not necessarily represent, but could be enacted or performed. Especially geographers defending a nonrepresentational standpoint (for example, Thrift, 1997, 1999) have not engaged more deeply with maps because of their “representational” status. For a proposal for a “non-non-representational geography of maps and mappings” see Del Casino Jr. & Hanna (2006, p.43-44).

phenomena in the landscape and the invisible driving forces of the social world. In addition, maps are not only tools of intervention between society and territory, but they also “effectively mould human intervention on territory” and “handle a complex geographical space by reshaping it as a cartographic space on the basis of which action is performed” (Casti, 2003, p.4). In summary, maps entail a dual representational strategy: both, as representations of space *and* as spaces of representation (Boelhower, 1988, p.213; see also Turnbull, 2000).

The *History of Cartography Project*, initiated in the 1980s by John Brian Harley and David Woodward and published by the University of Chicago Press, can be considered a path-breaking study of maps from a cultural perspective. In the preface of the first volume of the series (*Cartography in Prehistoric, Ancient and Medieval Europe and the Mediterranean*), Harley and Woodward (1987, p.xvi) presented a useful cross-cultural definition of maps. For them, maps were “graphic representations that facilitate a spatial understanding of things, concepts, conditions, processes, or events in the human world”. In a later volume in the series focused on societies in traditional Africa, America, the Arctic, Australia, and the Pacific, Woodward and Lewis (1998) expanded the scope of cartographic representations by adding performance, cognitive cartography and other material, non-material or ephemeral forms of spatial expression that were not restricted to academic cartography with its “vigilantism” and “dictatorship of accuracy” (Harley, 1989a) and did not necessarily match with the Euclidean and Cartesian ideas of geometrical space. Woodward and Lewis gave emphasis to different ways of thinking, perceiving and representing space that were not exclusively manifest in maps, but that are also imbued in social practice and performance such as dance, gestures, songs and rituals (Woodward & Lewis, 1998).

Maps in Cultural Geography

How do these new trends in cartography manifest themselves in geography? Human geographers are eager to state that maps are closely related to what geography and space is all about. For example, half a century ago, Carl Sauer compared maps to the language of geography because they “break down our inhibitions, stimulate our glands (*sic*), stir our imagination, loosen our tongues” (Sauer, 1956, p.289). In the late 1960s, the eminent geographer David Harvey (1969, p.369), still in his quantitative phase, alleged that of the “number of techniques for portraying, representing, storing and generalizing information (...) there is none quite so dear to the hearts and minds of geography as the map”. While this observation can surely be considered a general but clichéd statement about the nature of geography, it does not necessarily correspond to the “minds” of the geographers themselves. Human geography, particularly cultural geography, has undergone many changes during the last century, turning the “history of a contested enterprise” (Livingstone, 1993) into a noisy cocktail party at which “except for a few uncomfortable folks standing lonely in the corners, everybody is talking but few can hear anything except the conversations of those nearby” (Sui, 2000, p.322).

The cartographic approach to cultural geography can basically be divided into two different foci: on the one hand, there is the study of maps as cartographic facts which entails principally the interpretation of cartographic representations in the context of their society. On the other hand, the cultural geographer is increasingly paying more attention to the cultural use of maps and culturally-specific mapping practices (Rundstrom, 1989). Both approaches correspond to what Matthew Edney (1997) defined as cartographic culture:

Cartographic culture encompasses not material map-artifacts, but the understanding of the practices of cartography which a society possesses, the forms of representation employed to experience and explore the world, and the means

whereby the social order permeates those representations in order to recast and recreate itself (Edney, 1997, p.32).

Denis Cosgrove can be considered a key writer for introducing these thoughts to cultural geography. While his earlier writings showed his concern with landscapes as a way of seeing (Cosgrove, 1984) or as iconographic structures (Cosgrove & Daniels, 1988), Cosgrove has turned his attention to graphic representations and maps in more recent years (Cosgrove, 1999, 2001). His *Mappings* were published in 1999 and gathered the thoughts and reflections of 12 scholars who were invited to write “essays around actual graphic representations of spatial patterns which may fall under a broad category of maps... [and which entail, among many other forms,] a circuit diagram, a tattooed torso or the topos of the heavenly Jerusalem” (Cosgrove, 1999, p.17). Cosgrove’s own definition of mapping is a rich source for further ponderings on how to map in cultural geography:

To map is
one way or another
to take the measure of a world,
to figure the measure
so taken in such a way
that it may be communicated
between people, places or times.
The measure of mapping is
not restricted to the mathematical;
it may equally be
spiritual, political or moral.
By the same token,
the mapping’s record is
not confined to the archival;
it includes the remembered,
the imagined,
the contemplated.
The world figured through mapping
may thus be material or immaterial,
actual or desired,

whole or part,
in various ways experienced,
remembered or projected.
(Cosgrove, 1999, p.1-2, my own poetic lineup of words)

Besides these aspects, Cosgrove also stressed that mappings can be considered creative acts that are spatial conversions of knowledge:

Acts of mapping are creative, sometimes anxious, moments in coming to knowledge of the world, and the map is both the spatial embodiment of knowledge and a stimulus to further cognitive engagement (Cosgrove, 1999, p.2).

Based on these ideas of this broader and more culture-related conception of mappings, Cosgrove further elaborated a set of research questions that could foster further studies on mappings in cultural geography:

- What has mapping meant in the past and how have its meanings altered?
- How have mappings served to project, order and arrange as well as to represent physical, social and imaginative worlds?
- How have mapping practices shaped modern seeing and knowing?
- How do contemporary changes in experiencing the world alter the meanings and practice of mapping?
- How do mappings inaugurate as well as trace a poetics of space? (Cosgrove, 1999, p.16-17).

Apart from Cosgrove's contributions to the map-culture debate, there are several other authors whose thoughts have stimulated a lively debate on cartographic perspectives and "human cartography" (Wright, 1942; Seemann, 2006a). While Denis Wood (1992) is at pains to unmask the ideological "power of maps", Jeremy Crampton (2001) discusses maps as social constructions linked to the genealogy of power in mapping practices and emphasizes the "multiple, contingent and exploratory perspectives of data" (p.235) that may be "an opportunity for cartography to renew its relationship with a critical human geography" (p.235). Another more recent publication is John Pickles' (2004) *History of Spaces* that provides a thorough account of cartographic reason and mapping in the geo-coded world, and a proposal to rethink cartography

as a processual and not a representational science. Pickles divides cartography into three “critical moments” that are strategies to map human knowledge and place: the “dreams” and wish images of the mapping enterprise and the cartographic imagination, the “magic” of science and expertise to map and transmute the world, and the “performance” through which maps and mappings function in society and produce subjects and constitute identities (Pickles, 2004, p.19-20). In the following four chapters of this dissertation I will return to these three moments when I discuss different aspects of mapmaking and mapping in the Cariri region.

These discussions about the “new nature(s) of maps” (Harley, 2001; Wood & Fels, 2008) do not replace previous approaches, since the “mapping” of space and place almost always represents the first step in geographical research: Description should precede interpretation.

Within this perspective, the interface between cartography and cultural geography has turned into one of the most dynamic subfields and does not exclusively rely on geographic and cartographic sources, but also draws from other areas such as historical geography, history, history of science, anthropology, and literature which employ maps in their own area-specific approaches (for example, Offen, 2007; Orlove, 1993; Turnbull, 2000; Turchi, 2004).

However, whereas some present-day cultural geographers are still critical of the usefulness of maps in their research, cartographers frequently show their openness to new technologies but at the same time express a certain unease to come to grips with these different ways of thinking about maps (Taylor, 1991). Monmonier (2000) hints at the cartographers’ concerns with the influences that could undermine cartographic scientificity:

In the 1990s, humanists and other devotees of postmodern critique appropriated the term – often used in its plural, cartographies – as a metaphor for the interpretation, rhetorical power and cultural relations of maps, diagrams and other graphical representations. In academia, though, a cartographer is a person who either creates or studies them (Monmonier, 2000, p.61).

Different from Monmonier's absolute conception that separates the mapmaker from society, I will insist on the plural of cartography: cartographies correspond to a wide range of mapping strategies that are not exclusive dominion of the professional cartographer, but that do express different ways of thinking, reading, and representing space and place.

A Brief Review of Cartographic Research in Cultural Geography

The redefinition of map and mappings has led to an increasing "mapmindedness" among cultural geographers who have approached cartography and its products and processes from a wide range of angles and contexts, from post-colonial studies that seek to reveal how nations, identities and race have been constructed or forged through maps and mappings to socially critical counter-mappings and map art.

The politics of representation could play an essential role in nation-building or in simply consolidating state power, while the "map as text" (Harley, 1990b) can turn into a powerful discursive tool that reflects, expresses and helps create geographic knowledge, political agendas, and social stereotypes (Culcasi, 2006, p.680).

Cultural, political and historical geographers show particular interest in maps that are used as geographical discourse and as persuasive devices to foster nationalism and shape identities and spaces that can be defined as a "geo-body" (Winichakul, 1994). These maps can precede or even nullify the real territory (Herb, 1997; Monmonier, 2005; Peckham, 2000). The use of maps for political purposes can also lead to "cartographic anxiety" (Gregory, 1994; Krishna, 1996), the fear that the clear distinction and fixed foundation may only exist on the paper map and not in the real space (Painter, 2008).

Popular, non-scientific and other “unofficial” cartographic representations such as tourist maps and sketch maps in newspapers and magazines reach a broader audience (Monmonier, 1989) and can be seen as social and political statements and tools for nationalistic policy making that, together with other national symbols such as flags, the national anthem or the coat of arms, help to create a national imagery (Kosonen, 1999), reveal particular geographical viewpoints (Cosgrove & DellaDora, 2005) or conjure up places that have never existed in this form (DeLyser, 2003).

Maps are not exclusively made of points, lines and polygons, but also contain text. These naming and renaming practices suggest partial narratives of settlement, displacement, migration, possession, loss and authority (Nash, 2002). Place names are also situated in a wider project of “spatial history” (Carter, 1987) and serve as powerful tools to manifest political and cultural control (Harley, 1990a) or naturalize racism and prejudice (Monmonier, 2006). The example of the “paper landscape” (Andrews, 1975) of the Ordnance Survey mappings of the Scottish Highlands in the 19th century (Withers, 2000) shows that, as reflections of social and political power, naming and mapping go hand in hand. The choice of place names creates authoritarian and “authorized” landscapes that simply leave the native population “written out” off the map (see also Friel, 1981).

Mappings do not only stimulate reactions, but can also provoke counter-mappings in many different forms and ways. Jeremy Crampton and John Krygier (2005) use the term “critical cartography” to present “imaginative mapping practices” that “undiscipline” academic cartography and that can open space for “multiple literacies” and “multiple cartographies” that can be helpful in order to empower indigenous communities to carry out counter-mapping practices and show cultural resistance (Johnson, Louis & Pramono, 2005). Counter-mappings

have been frequently discussed in the context of political ecology in “Third World” countries (Peluso, 1995; Fox, 2002; Herlihy, 2003; Orlove, 1991, 1993, 2002). During these encounters between indigenous and scientific mappings, surveyors and local populations negotiated different space conceptions (Craib, 2004; Monger, 2005) or “counter-mapped” to make their claims (Sparke, 1998). A parallel to these “indigenous” practices can be found in “western” initiatives of parish and community mappings (Crouch & Matless, 1996; Perkins, 2007; Elwood, 2006; Grasseni, 2004; Wood, 2010, p.143-155).

Mapping projects based on community or even personal conceptions of space frequently blend cartographic language and artistic expression. Besides the counter-mapping projects in an intercultural context, there are also mapping initiatives within one’s own society that subvert the official cartography (Pinder, 1996) and mingle spatial representations with art and performance. Denis Cosgrove (2005), for example, provides a useful discussion of the relations between art and cartography in the 20th century that focuses “on mapping practices rather than on maps as such” (p.35). There is no limit to creativity.⁴³ Performance can even be inscribed in space as is shown by Cosgrove and Martins (2000) who discuss “performative mappings” with regards to the millennial celebrations in Rome and London. While the city of London created visible iconic millennium structures (e.g. Millennium Dome) to commemorate the year 2000, Rome offered a “Jubilee pilgrim trail” between the city’s main basilicas which performed the figure of a Christian cross on the town plan. Barnes (2007) recently mapped graffiti territories in Northern England and worked out a map showing the graffiti texts themselves instead of the streets, while Katherine Harmon (2003) edited a substantial collection of unconventional maps that emphasized their authors’ imagination and willingness to “venture beyond the boundaries of geography or convention” (Harmon, 2003, text on dust jacket).

⁴³ For a detailed survey of contemporary map artists, see Harmon (2009).

A literature review on maps and mappings in cultural geography is far from being a complete account of these activities. This review shows a wide spectrum of research projects in cultural geography and neighboring areas that take maps and/or forms and ways of mapping into account. Recent debates on representation, non-representation and “more-than-representation” (Lorimer, 2005) have promoted a broader concern for cartography under a cultural perspective, both in a literal and a metaphorical sense.

However, there is still a lack of methodological discussions on how to use maps and mappings in qualitative research projects. Suchan & Brewer (2002), for example, discuss “an array of qualitative methods for mapmaking and map use” (p.145) such as questionnaires, interviews and verbal protocols, but they restrict their reflections to the “problem-solving realms of mapmakers and map users” (p.145). Questions such as “what is the expected usefulness of charts for map-color selection?”, “what are the learning techniques people use when studying a map?”, or “what is the impact of technological transition on cartographic practices at agencies and firms?” (p.148) are addressed and signal an increasing openness towards cultural perspectives in cartography, “moving away from the specious assumption of researcher neutrality and collaborating with mapmakers and users in their mental realms of expertise and problem-solving” (p.153). However, these methods still remain narrowly based on the map itself and the “best” ways to represent space and place and not the social, cultural, and political contexts of mapmaking and map reading.

Gillian Rose (2007) presents a wide range of analytical approaches to visual culture in her path-breaking manual for visual methodologies (already in its second edition), but she does not mention maps and mappings as visual resources. Whereas her book deals with a wide range of visual materials from photos, drawings, and fine art paintings to television programs and the

ways a museum organizes its collection, almost all of her methodologies (e.g. discourse analysis, semiology, content analysis, psychoanalysis) remain based on linguistic sources.⁴⁴ An exception is chapter 10 in her book in which she presents an anthropological approach to visual culture that entails the direct observation of the social life of visual objects and what people do with these materials.

One of the challenges in this dissertation will be how to integrate maps and mappings in cultural-geographic research in particular and how to insert cartography into society and culture in general. For this reason, this dissertation will place a stronger emphasis upon methodologies or strategies to study maps and mappings rather than provide painstakingly detailed interpretations.

Maps as Metaphors

Earlier cultural geographers had a material and literal understanding of cartography as a tool to map culture. Berkeley geographer Carl Sauer, for example, used the term “cultural map” for cartographic representations that showed “the present condition of occupation”, indicating the “‘work of man’ shown on topographic maps” (Leighly, 1976, p.339).

Norman Thrower (1966) can be considered the creator of the term “cultural cartography”. In his dissertation research, he examined the effects of the different cadastral surveys in Northwestern Ohio and their impacts on the landscape. The “unsystematic manner” or “metes and bounds” of the Virginia Military District and the American Rectangular Land Survey System resulted in different landscapes in the same environment. For Thrower, the systematic study of

⁴⁴ See Mike Crang’s (2010, p.208) critique of visual methods and methodologies: “Indeed if one were to look at the methods covered in qualitative textbooks in geography, then the overwhelming dominance is of linguistic sources – be they written and/or spoken.” Crang proposes a set of “visual ethnographies that seek to offer an engaged, participatory form of seeing and set it against a more ironic and perhaps even alienated, critical forms of seeing” (p.209).

the geography of land subdivision had to deal with visual aspects of the landscape, the boundaries (some invisible) of the lots and “human patterns” that were “best seen from above” (Thrower, 1966, p.xii). This approach to rural geography depended on maps and “might be considered *cultural cartography*” (Thrower, 1966, p.xii, my emphasis).

Two other geographers have independently borrowed this term from Thrower’s study: Richard Sambrook (1981)⁴⁵ used the expression in his study of the “historical lineaments in the Straits of Mackinac” in Lake Huron, whereas Robert Rundstrom’s (1987) cultural cartography consisted of the examination of the spatial thought of the Central Canadian Inuit in relation to the physical and human geography in the Arctic. For his study Rundstrom lived as a participant observer with the Inuit and juxtaposed these empirical findings to a set of 37 historical maps made by the group in the past.⁴⁶ Rundstrom drew the conclusion that due to the inhospitable conditions of the Arctic and their nomadic life-style, the Inuit considered maps not as objects or artifacts, but a process in which the environment was recapitalized on a daily basis.

The anthropologist Clyde Kluckhohn (1949) also used the term cultural map when he compared a culture and its traditions to the abstractness, generalizing principles, and patterns of cartographic representations:

Culture is like a map. Just as a map isn’t the territory but an abstract representation of a particular area, so also a culture is an abstract description of trends towards uniformity in the words, deeds, and artifacts of a human group. If a map is accurate and you can read it, you won’t get lost. If you know a culture, you will know your way around in the life of a society (Kluckhohn, 1949, p.30).

⁴⁵ Richard Sambrook, e-mail to Jörn Seemann on 01/22/07.

⁴⁶ In an e-mail reply to me, Robert Rundstrom affirms that “Thrower is the only other person in cartography or, more broadly, in geography, that had used the phrase before me, to my knowledge. It may have been used in another discipline like anthropology, but I doubt it. And Thrower didn’t really develop it beyond his use on p.xii of his book. He appeared to sort of toss the phrase out there, but he didn’t expand on it or flesh it out at all. As I recall, it appeared in his book only there in the introduction” (e-mail to Jörn Seemann on 01/22/07).

Kluckhohn, like almost the entire scientific community of his times, believed in the objectivity and efficiency of maps to guide us through space and time. A cultural map for him, therefore, metaphorically included a complete list of traditions and behaviors that the anthropologist could read and relate.

The French sociologist Pierre Bourdieu (1977) argued that the map metaphor could be used to describe the gulf between “potential, abstract space” and “the practical space of journeys actually made” by people from the respective places:

... it is the analogy which occurs to an outsider who has to find his way around in a foreign landscape and who compensates for his lack of practical mastery, the prerogative of the native, by the use of a model of all possible routes (Bourdieu, 1977, p.2).

The emergence of new paradigms that challenged the traditional conceptions of culture caused a “Civil War” in the subfield of cultural geography (Duncan, 1994) and opened space for alternative approaches to the subdiscipline, including new conceptions about maps and mappings. The first textbook on these “new” approaches was published in 1989 by the English cultural geographer Peter Jackson (Jackson, 1989). Despite its title, *Maps of Meaning*, Jackson did not make a plea for cartography in cultural geography, but used the term *map* as a metaphor.⁴⁷ He borrowed the idea from the Jamaican-born sociologist and cultural theorist Stuart Hall, according to whom “culture included the ‘maps of meaning’ which make things intelligible to its members” (Clark, Hall, Jefferson & Roberts, 1976, p.9). In Jackson’s own words, “cultures are maps of meaning through which the world is made intelligible” (Jackson, 1989, p.2).

⁴⁷ In a reply to my e-mail, Jackson made the following observations: “My own use of the term in *Maps of Meaning* was almost entirely metaphorical (I included a few maps to discourage critics from taking an easy shot at the lack of real maps in a cultural geography book...). But you'll see from the cover of the original edition [showing an image combination of photos and maps] that I was interested in the connections between 'real' maps and other forms of representation of space (in this case Lower Manhattan). The image was especially appropriate as I'd done my own PhD fieldwork in Manhattan, examining Puerto Rican migration to NY” (Peter Jackson, e-mail to Jörn Seemann on 01/26/07).

It is exactly in the differences between the analogy and the metaphor of maps that cultural geography could establish a dialogue. Whereas maps in their physical form mean explanation, model, explicitness and similarity, maps as metaphors signify expression, image, implicitness and identity (Downs, 1981).⁴⁸ My argument is that cultural geographers should also explore the metaphorical meanings of maps and their potential to stimulate reflections about space and culture (see also Mitchell, 2008).

Lakoff and Johnson (1980, p.6) claim that metaphors have a strong impact on the ways we think and act because they structure and define human thought processes and conceptual systems:

Metaphor is for most people a device of the poetic imagination and the rhetorical flourish - a matter of extraordinary rather than ordinary language. Moreover, metaphor is typically viewed as characteristic of language alone, a matter of words rather than thought or action. For this reason, most people think they can get along perfectly well without metaphor. We have found, on the contrary, that metaphor is pervasive in everyday life, not just in language but in thought and action. Our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature (Lakoff & Johnson 1980, p.3).

The study of the impact of metaphors is not restricted to linguists and literary scholars, but has also been a concern for humanistic geographers such as Yi-fu Tuan (1957, 1991) and Anne Buttmer (1982). Whereas Tuan (1957, p.11) makes a plea for maintaining the “tradition of vivid description” in geography, Buttmer claims that the metaphor “touches a deeper level of understanding than ‘paradigm’, for it points to the process of learning and discovery-to those analogical leaps from the familiar to the unfamiliar which rally imagination and emotion as well as intellect” (Buttmer, 1982, p.90).

⁴⁸ See also Livingstone & Harrison’s (1981) reflections on the role of metaphors in the development of geographical epistemology.

The map metaphor in particular helps to connect the different epistemologies of the late twentieth century by performing the “shift from concrete map to cognitive map, from being to becoming, from metaphor to metamorphosis” (Mitchell, 2008, p.4). The late Denis Cosgrove affirmed that the distance between conventional mappings and their metaphorical meanings has been reduced in the last decades:

The distance between conventional usage and the metaphorical meanings of mapping as a cognitive spatial practice has shortened considerably in recent scholarship, so that all sorts of purely mental and imaginative constructs are now treated as maps, while supposedly objective and scrupulously accurate scale renderings of real-world distributions are regarded as inescapably dyed with ideological, psychological and other subjective hues. Yet, what remains consistent throughout the changing study of the map, within and outside geography, is its graphic reference. Mapping remains a way of representing the world, the map remains a visible image of the (or at least *a*) world (Cosgrove, 2008, p.2).

Map metaphors have appeared in the titles or contents of a plethora of academic publications during the last three decades.⁴⁹ While some researchers, for example, map the Victorian social body (Gilbert, 2004), subaltern studies and the postcolonial (Chaturvedi, 2000), or our ancestors (Lipo et al., 2006), others produce cartographies of the “male-male sexuality in Japanese discourse” (Pflugfelder, 1999) or contesting diaspora identities in the world (Brah, 1996).

Table 3.1 provides a brief description of mapping approaches in the social sciences and shows that the geographical mapping perspective is only one “way of seeing” among many others.⁵⁰ This play with cartographic metaphors may also represent a risk when these words are used as fashionable buzzwords stripped of any deeper meaning:

⁴⁹ There are also earlier examples for the map metaphor as analogy to scientific theories (Toulmin, 1953) and semantics (Korzybski, 1948).

⁵⁰ In the 1980s and 1990s, the educator Rolland Paulston used the term “social cartography” which he defined as “the art and science of mapping ways of seeing” (Paulston, 1996, p.xv). He employed this metaphor to debate on political and educational change. His initial inspiration was Frederick Jameson’s writing on cognitive mappings and the cultural logic of late capitalism (Jameson, 1991).

Cartographic metaphors ('mapping' and 'space' are conspicuous examples) have gained widespread prominence in an array of academic disciplines. Their application is laudable in as much as it *may* reflect an increased sensitivity to space in critical theory. However, there is a real danger that a proliferating and metaphorical promiscuity may give such words little more than a trendy banality, sapping them of any critical meaning (Craib, 2004, p.2-3).

Table 3.1: Mapping perspectives in human sciences discourse (adapted from Paulston & Liebman, 1993)

Mapping perspective	Focus on	Disciplinary Base
<i>Cognitive</i>	<i>Mental space</i> : mapping the mind	Humanistic psychology
<i>Semiotic</i>	<i>Rhetorical space</i> : mapping texts and tropes	Linguistics, Literary theory
<i>Social</i>	<i>Social space</i> : mapping social positions and relations	Sociology, Urban studies Anthropology
<i>Geographical</i>	<i>Symbolic space</i> : mapping landscapes as metaphor, text, icon	Cultural geography
<i>Comparative</i>	<i>Intellectual space</i> : mapping ways of seeing, forms of division	Cultural sociology, Philosophy

The critical educator Peter McLaren (1986) helps us to see these spatial metaphors as guiding principles for the understanding of space and society. His “cultural cartography” is an overarching term for critical theory of cultural analysis that he conceives as a call to “provide oppositional curriculum instruction in schools” to unravel “hegemonic apparatuses and regnant discursive practices” (p.255) beyond shallow psycholinguistic interpretations and banal meanings. For McLaren, this mapping

must go beyond the superficial level of locating penises in the ice cubes of liqueur advertisements or marveling at the reasons why Arabs like to stand closer than Americans during informal conversations (McLaren, 1986, p.255).

Tom Conley, a scholar in Romance languages and literatures, sees the mappings in the social sciences and humanities not as accurate surveying, but rather as intellectual processes within a web of meanings (Geertz, 1973):

The field of cultural studies is riddled with the idea of ‘mapping’. The term is often understood to be a superimposition of one or more critical templates of a given discipline onto others from another that can reveal unforeseen patterns or

webbings of relations. The student in the field is not so much a cartographer in the historical sense of a surveyor and draftsman than as an intellectual engineer, an individual designing hypotheses affiliated with codes of spatial reason (Conley, 2009, p.131).

The Australian social scientist Peta Mitchell (2008) has written an entire book on the map metaphor in theory and fiction. For Mitchell, the map metaphor is an indicator of how knowledge and meanings are negotiated:

Like cultural geography, the deconstructive map metaphor does not reject mapping, but emphasizes the experiential and political dimension of cartography. More importantly, it does not deny the need for points and borders – indeed recent uses of the metaphor obliterate established epistemological boundaries only to re-peg them elsewhere – but it does emphasize that these markers can only ever be temporary (Mitchell, 2008, p.168).

The Portuguese sociologist Boaventura de Sousa Santos went even beyond the metaphor-analogy divide (Santos, 1987). He analyzed juridical systems through the lens of the three basic cartographical principles (scale, projection, and symbology): “In my view, the relations law entertains with social reality are much similar to those between maps and spatial reality. Indeed, laws are maps; written laws are cartographic maps; customary, informal laws are mental maps” (Santos, 1987, p.282).⁵¹

A Proposal for a Cultural-Cartographic Framework

A cultural-cartographic framework for empirical studies needs to take into account both the literal and the metaphorical sense of maps and mappings. Barnes and Gregory’s (1997) reflections on politics and poetics of inquiry in human geography serve as an inspiration for my research agenda. In the foreword of their reader on human geography, they report the effects of the shifting paradigms and the epistemological dynamics in the discipline that made many

⁵¹ See also my own reflections on the use of map metaphors as tools for geographical analysis (Seemann, 2005).

human geographers recognize the “partialities of their local knowledges” and the “multiple voices of the people they seek to study” (p.2):

Instead of tying up all the loose ends and weaving a seamless and regular spatial pattern, they are much more likely to draw attention to the dangling threads and dropped stitches, to the tears and holes in their geographical fabrications... they are much more likely to inhabit the tense and creative spaces between different and dissonant theoretical traditions (p.2-3).

My use of the terms politics and poetics in cartography alludes to the “dangling threads and dropped stitches” in cartography, that is, the contradictions, tensions, and complementarities of mapmaking, map reading, and mapping. Whereas politics corresponds to the ways cartographic representations and their supposed mask of neutrality are strategically used and abused to exercise power, control, and citizenship, poetics refers to the ways we transmit and share our knowledge of space and place. The worlds created by politics need words to be expressed whereas poetics need spatial contents to have something to narrate:

Poetics is not equivalent to purple prose, or the unfettered use of language, quite the opposite. It is about treating words with respect, recognizing their power, passion and potential, and using them with precision and consequence [for inquiries in cartography] (Barnes, 2000, p.588).

Within this context, maps can be “real” and material or merely abstract and conceptual whereas mappings can express literal or metaphorical ways of retrieving and processing knowledge. In some cases, these mappings do not refer to space or place at all and use the cartographic metaphors rather as fashionable buzzwords.

Figure 3.1 shows a simplified scheme in which I juxtapose the four different “cultural-cartographic” approaches that form my framework for cultural cartographies: mapmaking, map reading, mapping, and the reading of mappings. These four methodologies must not be conceived as separate realms, but as overlapping and complementary strategies. The links

between mapmaker and map reader, and between mapper and reader of mappings are stronger than the diagonal connections.

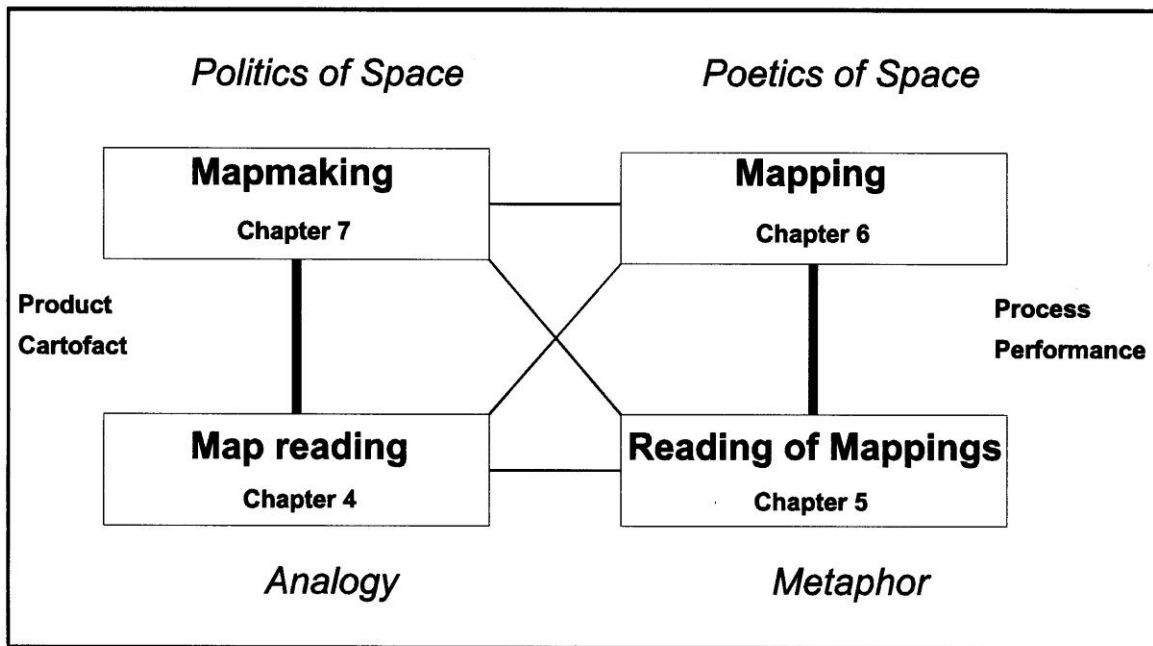


Figure 3.1: Maps and mappings in cultural geography

The cross-relations between the cartographer and the “mappist” (Lopez, 2005) on the poetic side are still awaiting a deeper examination. My argument is that cultural geographers should be familiar with both sides of this diagram: They should know how to produce and read maps *and* how to “map” and interpret the complex relations between space and culture in order to connect product and process, politics and poetics, analogy and metaphor, representation and performance.

Due to the complexity of this framework that even entails “methodologies within a methodology”, I found it necessary to include an entire chapter on “theories and methodologies” in my dissertation and “test” the four proposed cultural-cartographic approaches empirically. Chapter 4 focuses on the geographer as map reader. I will present the Cariri through its cartographic history that entails not only material maps of the region, but also their cultural,

political, and historical contexts. The subsequent chapter 5 deals with the reading of mappings. I will read between the lines of mental maps of the region in order to obtain further details about how people perceive and represent the Cariri. Chapter 6 aims to “map” the histories and geographies of the region through the use of interviews with regional scholars, chroniclers, and buffs whereas the last methodological part (chapter 7) is about mapmaking, challenging my own skills and strategies to represent the region (carto)graphically. These four strategies will be juxtaposed and compared in the concluding chapter of my dissertation.

My own proceedings entail at least two novelties, if not provocations: First, a deeper discussion of “cultural geographies in practice”.⁵² I mentioned in the introductory notes to this study that the processes of “doing cultural geography” are frequently omitted from the published versions. My attempt is to include as many details of my own research as possible in my writing in order to stimulate a further debate on how fieldwork in cultural geography is done. Secondly, this dissertation uses multiple cultural-cartographic methodologies combining a wide range of materials and strategies in one text. To my own knowledge, there has not been done any research that simultaneously deals with historical maps, mental maps, interview on maps, and processes of mapmaking and mapping.

Together with Pickles (2004, p.16), I argue that the inclusion of different kinds of mappings (experimental, cognitive, popular or spatial-analytical) in the “story of cartography” can open new perspectives about maps and culture and create a cartographic multivocality. The challenge of this research lies in the attempt to dialogue between these different cartographic views in order to create a deeper account of the human nature of maps and mappings.

⁵² This is a deliberate allusion to two sources: *Cultural Geography in Practice* (Blunt et al., 2003), a collection of texts on the practical issues of research in cultural geography, and the section *Cultural Geographies in Practice* section of the academic journal *cultural geographies* that aims to present critical reflections about practice that are not restricted to the narrow settings of academia.

Chapter Four: Map Reading Cartographic (Hi)stories of the Cariri

“There on the table, the map could only be a piece of paper, nothing else. However, it can mean a grandiose universe full of symbols and legends, marvelously mute when it speaks to those it looks at. The map represents itself to us continually and plays with our lack of knowledge of our planet. The map has us in its hands; it’s not us who have it. And so it keeps slipping as if it were colored sand between our fingers. The map is a great representation, that’s its role, the rest is only impression” (Fernandes, 2003, p.57-58, my translation).

In his collection of chronicles entitled *Geography Lesson*, the Brazilian geographer Manoel Fernandes (2003) affirms that maps are far more than pieces of paper spread in front of us. Maps are not only representations, but also impressions in a double sense: imprints on paper and “telling images impressed on the senses or the mind” (*Merriam-Webster’s Collegiate Dictionary*, 2003, p.626). For this reason, map reading must go beyond the map and take into account the texts and contexts of the societies in which they were produced and the meanings attributed to them.⁵³ In other words,

Far from holding up a simple mirror of nature that is true or false, maps redescribe the world – like any other document – in terms of relations of power and of cultural practices, preferences, and priorities. What we read on a map is as much related to an invisible social world and to ideology as it is to phenomena seen and measured in the landscape. Maps always show more than an unmediated sum of a set of techniques. The apparent duplicity of maps – their “slipperiness” – is not some idiosyncratic deviation from an illusory perfect map. Rather it lies at the heart of cartographic representation (Harley, 1990b, p.4)

The conception of maps as texts opens the possibility to extract information and interpret words, images, and their relationships. Simply put,

⁵³ More recently, Wood and Fels (2008, p.8-10) have used the term *paramap* to tackle the questions of context in cartography. *Paramaps* consist of *perimaps* (visible elements such as titles, graphics, photos, scales, compass roses, etc.) and *epimaps* (“stories” behind the production such as letters to the editor, the comparison of different editions, and other details about the production, dissemination, commercialization, and reception of a map).

The fascination of maps as humanly created documents is found not merely in the extent to which they are objective or accurate. It also lies in their inherent ambivalence and in our ability to tease out new meanings, hidden agendas, and contrasting world views from between the lines on the image (Harley, 1990b, p.4).

In this chapter I will read “between the lines” of maps that represent the Cariri region and investigate the region’s cartographic coming-into-being. How did it initiate its cartographic existence? How, when, and under what circumstances did it show up on maps? How was it represented? How did it change in the course of time and in what contexts? What meanings, agendas, or world views can I “tease out” of the maps, taking into account that most of the maps do not focus on the Cariri itself.⁵⁴ And finally, can these maps tell us regional (hi)stories and close some of the gaps in regional history and geography? These are only a few questions that can be asked about the *cartographic (hi)stories* of the Cariri. I have chosen this unconventional expression in order to point out the continuum between story telling (“stories”) and history-writing (“histories”, not “history”).

For this task I adopted (and adapted to) Francaviglia’s (2005) strategy for narrating the cartographic history of the Great Basin. Francaviglia shows the cartographic transformation of the “empty” and “open” space in the western United States American and illustrates the “gradual emergence” of the region from its “vast cartographic silence” to the present-day representation. Similar to the Great Basin, the Cariri region was represented in different (carto)graphic forms during different time periods with “different standards of surveying and scientific knowledge and methodology at each time” (Francaviglia, 2005, p.xiv), whereas the contents and silences in these maps also depended on how “explorers, surveyors, travelers and planners have perceived, defined and organized the physical landscape” (p.xiv). Within this context, these mappings

⁵⁴ Maps that exclusively represent the Cariri region are rare.

reveal something about the region and the mapmakers at the same time and “the process by which maps and related images reveal the character of places” (p.xiv). Therefore, reading these maps essentially means dialoguing with them.

Another example for a cartographic history is Jordana Dym’s (2004) account of travel narratives and mappings in Central America between 1821-1945.⁵⁵ In her study, Dym includes a wide range of cartographic representations from early nineteenth-century “official” survey maps to language maps, trade maps, town maps, and Esso road maps. Her focus is on how and what the foreign travelers mapped. Two separate impulses determined these mappings: surveys of land and life in order to “fix national boundaries, suggest ideal courses for canals and railroads, and match linguistic groups to specific territories” (Dym, 2004, p.341), and the “license to include [the traveler’s own] artistic and impressionistic portrayals of travel routes” (p.341) for their readership.

In the case of the Cariri, few specific travel narratives exist since the region remained “off the beaten track” for a long time. Even less frequent are the cartographic depictions of the region. On the following pages I will present aspects of the regional past and present by the use of about thirty distinct maps in different scales and from different time periods. This attempt to reconstruct the cartography and geography of the region includes maps and charts from the colonial times (around 1500 to the beginning of the nineteenth century), the Brazilian Empire (1808-1889) during which the country “discovered itself,” and the period of technological “progress” in the age of twentieth-century modernity.

⁵⁵ There is, of course, a large number of historical atlases that narrate the history of a region, a country, or a continent through the use of contextualized historical maps (for example, Cortesão & Teixeira de Mota, 1960; Davidson, 2003; Lemmon, 2003). However, these publications stress the cartographic representations and the historical context in general rather than the narratives directly linked to them.

The table below provides further information on the quality, provenence, and nature of the maps that I either consulted for the writing of this chapter or selected for this cartographic reading of the Cariri. The material has been collected from different libraries, archives, and internet sites and represents a diverse and heterogeneous sample. My aim was to present a set of maps that includes (or excludes) the region in as many different ways as possible rather than to quantify the contents and forms according to determined patterns.⁵⁶

Table 4.1: Cartographic material used for consultation and/or map interpretation

Library/archive	Nature of maps	Comment
<i>Brazilian archives:</i> Biblioteca Nacional do Brasil Arquivo Nacional	14 maps, mainly regional maps of the Brazilian Northeast of the Province of Ceará, time period: early 1800s-1922 2 rare maps	Includes the only 19 th -century map of the Cariri region; also several manuscript maps Early 1900 map showing the telegraph line that crosses the tablelands; map showing a project to divert the waters from the São Francisco River
<i>Other printed material:</i> Cartographic Information Center (CIC) at LSU	8 maps (7 thematic maps) showing aspects (language, geology, etc.) of Brazil or Northeast Brazil	More recent cartographic material from mid 20 th -century to present
Material acquired or owned by author	Thematic and topographic maps of the region; maps in academic publications or technical reports	Paper or digital maps of the region and the Araripe Plateau
Library of Congress (digital collection)	26 maps, time period: 1680-1910	Official small-scale representations, mainly by foreign cartographers
<i>Digital collections:</i> World Digital Library (WDL) Biblioteca Nacional de Portugal Biblioteca Nacional do Brasil	6 maps, 5 from before 1800	Many Portuguese authors and rare maps in reasonable resolution
Other digital sources	Maps on the internet: sites on cartography and geography, wikimaps, blogs, etc.	Additional material, including present-day satellite images

⁵⁶ An example for a map interpretation is Collins-Kreiner's (2005) study of the messages, myths, and narratives in 101 maps of the Holy Land. For her project, she used a mixed method based on content analysis and defined 25 map characteristics and three categories of narrative (Christian, Jewish, Muslim). For my own cartographic study of the Cariri, I will focus on the "(hi)stories" that are linked to the maps. I defined three map narratives that correspond to three different time periods in the cartographic history of the region.

Colonial Times (1500 – Early 1800s): Cartographic Invisibility

The European history of Brazil started with the arrival of Pedro Álvares Cabral and his fleet at the shores of Northeast Brazil on April 22, 1500. Within three decades, Portuguese colonists and adventurers initiated the so-called sugarcane cycle (roughly from 1530 to the early 1700s) during which sugar plantations, cultivated first by forced indigenous workers and then with enslaved Africans, emerged in the coastal areas in order to supply the almost insatiable demand in the Old World (Prado Jr., 1967, p.25-50). As a result of this, the idea of colonial Northeast Brazil is frequently reduced to the image of a plantation society throughout the entire country. The influential works of the Brazilian sociologist Gilberto Freyre on slavery and plantation society (Freyre, 1936, 1937) even underlined this picture. Freyre presented the Northeast as an economy essentially moved by sugarcane. However, this “sweetness of power” and wealth was limited to a rather narrow coastal strip from Bahia to Pernambuco, whereas a considerable part of the region was unsuitable for agriculture due to its inaccessibility and “swampiness” (e.g. coastal towns such as João Pessoa) or their climatic conditions, especially the aridity in drought-prone Rio Grande do Norte, Paraíba and Ceará that only permitted transhumance cattle raising. The vast areas in the “interior” remained as “blank spaces” on the map or were subject to speculations or myth. Derived from the Portuguese word *desertão* (“big desert”) the inland region was considered an empty space without any economic and political interest – a space for which there was no need for its inclusion on a map.

Maps from the late eighteenth and early nineteenth century frequently were bad copies of original maps with many typos and mismatches. Mapmaking was an act of copycatting and the reproduction of existing maps (eventually with updates and a few additional sources) rather than the result of in-situ surveys. Many cartographers never saw the places they were mapping and

depended on sources such as eyewitnesses, written travel accounts, or other maps from which they copied the necessary details (Zandvliet, 1998; Pedley, 2005; Petto, 2007).

The *Accuratissima Brasiliae tabula* (1630) by the Dutch cartographer Henricus Hondius (figure 4.1) is an example of a cartographic representation of seventeenth-century Brazil. The coastline from north to south (west is the top of the map) abounds with place names, mainly denominations for rivers and bays, and names of indigenous tribes (Topimambazes, Marquites, etc.), while the blank spaces in the interior are filled in with pictorial scenes of war, cannibalism and indigenous laziness symbolized by a hammock. The main water course in coastal Ceará is the Siope River that, according to the map is further connected to the Amazon river basin (Rio Pará) that is linked to a mysterious lake system to the east. However, a comparison to present-day maps shows that the supposed river is only a wide lagoon (*Lagoa dos Talos*) of a small creek (Riacho Mocó) that dries out about 20 miles further inland.



Figure 4.1: *Accuratissima Brasiliae Tabula* (Hondius, 1630)⁵⁷

⁵⁷ Library of Congress, Digital Map Collection

The Hondius map is not unique. In seventeenth-century Holland it was common to have a base map that each mapmaker used as a matrix to produce his own atlases or charts. For example, a comparison between the Hondius map and Willem Blaeu's *Novus Brasilia Typus* (figure 4.2) shows that the place names are almost identical. However, each cartographer selected different pictures and drawings to express his own individual style.⁵⁸ One can only speculate about the location of the Cariri region in the maps - most probably somewhere between the river branches and the hill and tree symbols, below a goat-like New-World animal in the Hondius chart and a scene of indigenous warfare in Blaeu's map.



Figure 4.2: Comparison of details in seventeenth-century Dutch maps (Hondius, 1630; Blaeu, 1631)⁵⁹

These Dutch maps are different from the more sober appearance of Frenchman Nicolas Sanson's *Le Brésil* from 1656 (figure 4.3) that is more concerned with the administrative division of the country. The Brazilian captaincies⁶⁰ are alternatively colored in light red and green in a not very broad strip from the coast to the interior. Numerous small rivers dissect the coastline, while their sources point without any definition to the empty space in the backlands. Unlike Hondius's map, Sanson dismisses any kind of drawing to fill the blank areas. A

⁵⁸ The Hondius and Blaeu families were rivals in the map business. As a result of this competition, "the production of globes, maps and atlases [was spurred] to new and unparalleled heights, [since] each continually tried to outdo the other with a better or a larger work" (Koeman et al., 2007, p.1314).

⁵⁹ Library of Congress, Digital Map Collection (Hondius map), Fundação Biblioteca Nacional, Brazil (Blaeu map).

⁶⁰ *Capitania* in Portuguese: a land title that the Portuguese king conceded to noblemen who had the exclusive rights to administrate the territory (Levine, 1979, p.47).

concentration of names of indigenous groups can be found in the space beyond a light brown division line that, according to the title of the map, separates the 14 Portuguese captaincies on the coast from the “middle of the country [that] is inhabited by a very large number of almost unknown indigenous peoples” (Sanson, 1656).



Figure 4.3: Detail from *Le Brésil* (Sanson, 1656)⁶¹

Native populations represent an important issue for some mapmakers who do not refrain from adding further comments on the map space. The Dutch cartographer Pieter van der Aa (1729), for example, refers to the lands of *Dele* and *Petaguei* as “not belonging to the Portuguese” (van der Aa, 1729), but enclaved in the Ceará captaincy. Despite the large number of different indigenous groups (whose names are frequently misspelled or corrupted), the Cariri tribes are not mentioned.

⁶¹ Library of Congress, Digital Map Collection.

Other European mapmakers were more interested in political claims and navigation routes. For example, the Frenchman Nicolas de Fer (1719) sharply separated the known areas by a thick red line. The backland remains void of any indigenous names and contains only a small number of symbolic mountain chains and rivers. De Fer did not leave any doubts about the ownership of these territories by adding a text that confirms the Portuguese claim: *Le Brésil decouvert par les portugais l'an 1501 que le nommerent pais de ste. Croix* (figure 4.4) - “Brazil, discovered by the Portuguese in 1501 (*sic*) who named it land of the holy cross.”



Figure 4.4: Detail from *Le Brésil* (De Fer, 1719)⁶²

⁶² Library of Congress, Digital Map Collection.

Brasilia (1671) by the Dutch cartographer Arnoldus Montanus (figure 4.5) emphasizes even more the European maritime vision of Brazil. The map simulates a Portolan chart, the principal navigation device for seafarers till the early 1500s (Campbell, 1987, p.395-396). The lines of compass bearing spike out from compass roses and create a dense network of lines that even continues in the emptiness of the backlands. The coast is literally overwritten by place names. The cartouche in the lower left-hand corner serves as a symbol for European superiority: The conquerors lean on a sign with the name *Brasilia*, while three almost faceless indigenous warriors sit down at their feet (figure 4.5).

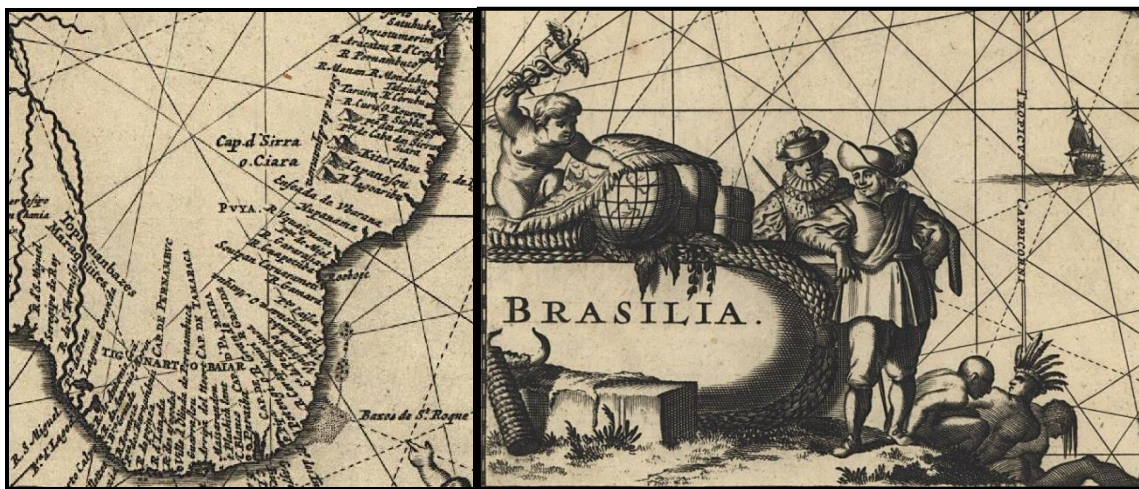


Figure 4.5: Detail and cartouche from *Brasilia* (Montanus, 1671)⁶³

Even in the early nineteenth century, mapmakers had only sparse knowledge about the Brazilian backlands. In his map, entitled *Brazil, or Trans-Atlantic Portugal* (1808), John Luffman (figure 4.6) copied the administrative divisions and filled in the center of the map below the embossed letters of the word Brazil with the sentence: “Interior of the country imperfectly known.” In other cases, the maps gained “contours” and began to represent the backlands as a real space. The empty spaces in the Northeast Brazilian *sertão* were gradually filled with more concrete details such as mountains chains and river courses.

⁶³ Library of Congress, Digital Map Collection.



Figure 4.6: Detail from *Brazil, or Transatlantic Portugal* (Luffman, 1808)⁶⁴

The *Map of Brazil now called New Portugal* (figure 4.7) released by the Irish-born publisher Mathew Carey (1814), on the one hand, overemphasizes the coast by adding an artistic set of bathymetric lines to indicate the inclination of the continental shelf.

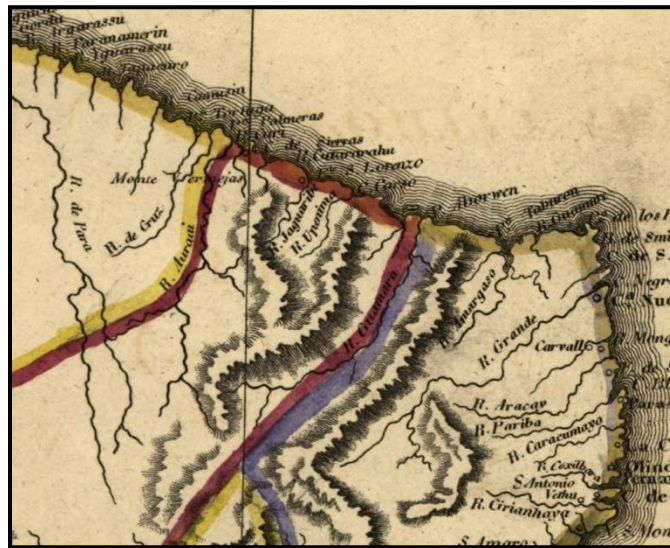


Figure 4.7: Detail from *A Map of Brazil, Now called New Portugal* (Carey, 1814)⁶⁵

On the other hand, the Jaguaribe River, the main water course in Ceará, is already included, framed by a surrounding mountain chain. Many maps of this time period indicate the

⁶⁴ Library of Congress, Digital Map Collection.

⁶⁵ Library of Congress, Digital Map Collection)

existence of mountains in the backlands, but leave form and location without precision. It was known that there were mountains in the interior, but nobody could define their exact position.

The presence of three different plateaus (Ibiapaba in the west, Borborema in the east and Araripe in the south) led to the inclusion of mountain ranges in the form of spinal cords (Finlayson, 1828, figure 4.8, left) or “hairy caterpillars”⁶⁶ (Burr, 1834, figure 4.8, right) that either divided the province of Ceará or put it into a frame. In his *Geographical, Statistical, and Historical Map of Brazil*, the American cartographer James Finlayson (1828) shows the Salgado River as a route to the backlands. After the misspelled name of the town of *De Yeo* (= Icó), the river simply fades out in the form of a dashed line.



Figure 4.8: Detail from *Geographical, statistical, and historical map of Brazil* (Finlayson, 1828) and *Brazil with Guiana & Paraguay* (Burr, 1834)⁶⁷

The map compilation *Brazil and Paraguay* by the British engraver and cartographer Sidney Hall (1828, figure 4.9) makes a reference to a place in the Cariri region, the town of

⁶⁶ Expression used by the American cartographer Erwin Raisz to describe the appearance of hachured relief representations in small scales (Raisz, 1962, p.76).

⁶⁷(Library of Congress, Digital Map Collection)

Crato.⁶⁸ However, Crato is somehow displaced at the shores of the Salgado River that appears as an independent water course and not as a continuation of the Jaguaribe River. The Borborema Mountains block the waters to the south whereas the Araripe Plateau, at whose foothills the town of Crato should be located, figures as a hachured mountain range even further to the south.



Figure 4.9: Detail from *Brazil and Paraguay* (Hall, 1828)⁶⁹

Imperial Brazil (Early 1800s – 1889): Brazil Discovers Itself

Many of the maps I have discussed in the paragraphs above were produced in England, France or Holland. The absence of Portuguese maps, especially from the early colonial period is striking (Kimble, 1930; Diffey, 1969; Alegria et al., 2007). This situation underwent a change with the political turmoil in Europe due to the Napoleonic expansion that forced the Portuguese

⁶⁸ I have not found any earlier references to the Cariri region in the more than 200 maps that I have consulted.

⁶⁹ David Rumsey Historical Map Collection.

court to flee to Brazil in 1808. The arrival of the Portuguese emperor in Rio de Janeiro directly triggered the interest in his new home country and its resources that had not been known before that time. Brazil began to discover itself and build its own national identity.

Initially, there was an aperture for foreigners, especially British and German explorers and scientists who traveled through the country in search for minerals, plants and animals. The Scottish botanist George Gardner (see chapter 2) is an example of these travelers in the “interior” of Brazil. The Cariri served as a stop en route from Fortaleza to Rio de Janeiro. On his map, three towns of the region are indicated: Crato, Barra do Jardim (Jardim today), and Brejo, a district of Santana do Cariri (figure 4.10).

In the preface of his *Travels to the Interior of Brazil*, Gardner (1846) modestly states that he has not written a better account than other travelers, but that he visited and described places that had not been “discovered” before, including the town of Crato where Gardner was forced to delay his voyage from the coastal town of Fortaleza in Ceará to the old imperial town of Oeiras in the province of Piauí, on his way through the *sertão* south to Rio de Janeiro:

The present volume is not given to the public, because the author supposes it presents a better account of certain parts of the immense Empire of Brazil, than is to be found in the works of other travellers, but because it contains a description of a large portion of that interesting country, of which no account has yet been presented to the world. It has been his object to give as faithful a picture as possible of the physical aspect and natural productions of the country, together with cursory remarks on the character, habits, and condition of the different races, whether indigenous or otherwise, of which the population of those parts he visited is now composed (Gardner, 1846, p.vi).

Foreign travelers such as Gardner were not only interested in the exploration and exploitation of natural resources, but also in cultural and scientific aspects. The same cannot be said about the Portuguese adventurers who had penetrated the backlands since the middle of the seventeenth century, first to hunt natives to be sold as slaves to the sugarcane plantation owners,

then to gather information about land and life, especially semi-precious stones and metals (Crow, 1992, p.249-254). These adventurers also produced cartographic material.

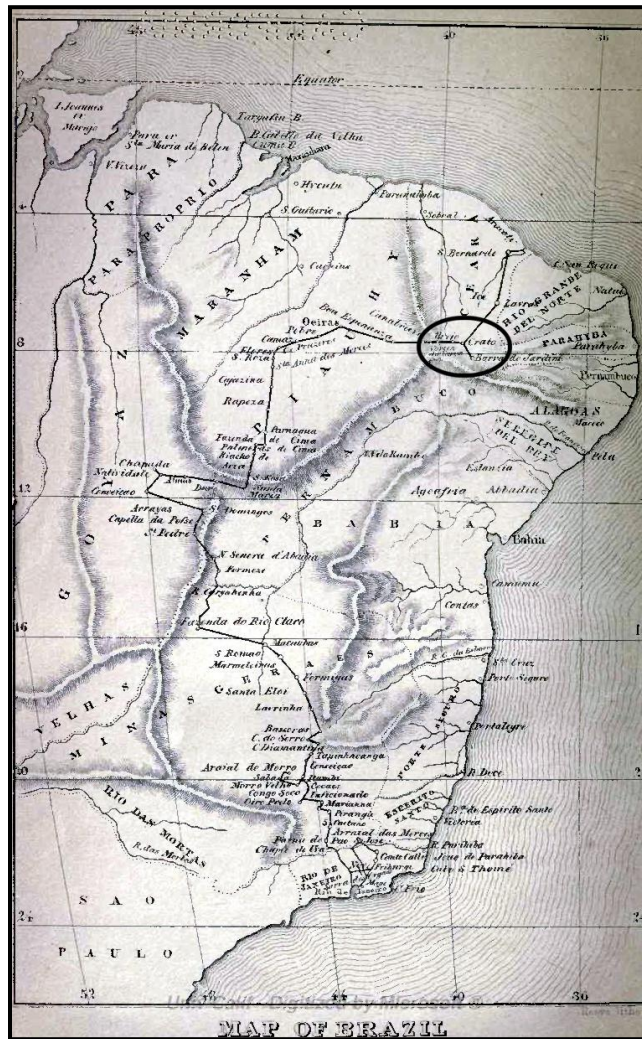


Figure 4.10: George Gardner’s *Map of Brazil* (Gardner, 1846, p.xviii)⁷⁰
 (the black circle indicates the location of the Cariri)

Figure 4.11 is an example of a manuscript map from the first half of the eighteenth century that shows travel routes and sketchy itineraries made by colonial scouts (*bandeirantes*), explorers and adventurers. The approximate position of Cariri is close to the text line “*terras mineraes*” – lands rich in minerals.

⁷⁰ Public Domain, Google Books.

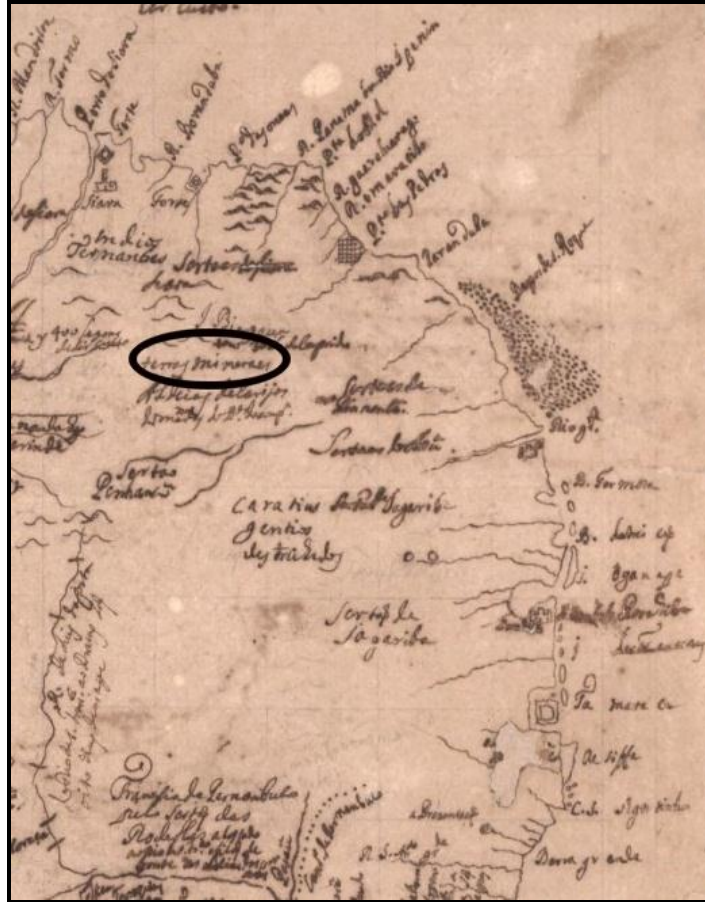


Figure 4.11: Detail from *bandeirante* map from the early eighteenth century (Anonymous, 1722)⁷¹

Figure 4.12 is another example of a hand-drawn route map. In the upper right-hand corner of the map whose top is directed to the south, the author proudly presents his drawing to the readers and provides them with a short informative text on the economy in the province of Ceará: “Mariano Gregorio do Amaral delineated [this] geographic map of the Captaincy of Siará in the year 1800” (figure 4.12). He mentions that *gado vacum* (cattle), horses, cotton, and tanned leather are the main commercial products, and states that “there are also some mines with saltpeter and precious stones” whose positions he does not indicate on the sheet. His map provides a somewhat different image of the dry backlands. The captaincy of Ceará consists of a detailed network of rivers that originate in about ten different mountain areas that are indicated

⁷¹ Permission by Fundação Biblioteca Nacional, Brazil.

by hill symbols and brown shading. The Cariri region appears at the top of the map, whereas the existing towns (Crato, Jardim, Missão Velha and Santana) are indicated by red church symbols along the different branches of the Salgado River. The lands beyond the Araripe Plateau are rendered invisible. The only text in the blank space refers to the town of Pajahu (today Flores) that belonged to the Province of Pernambuco.

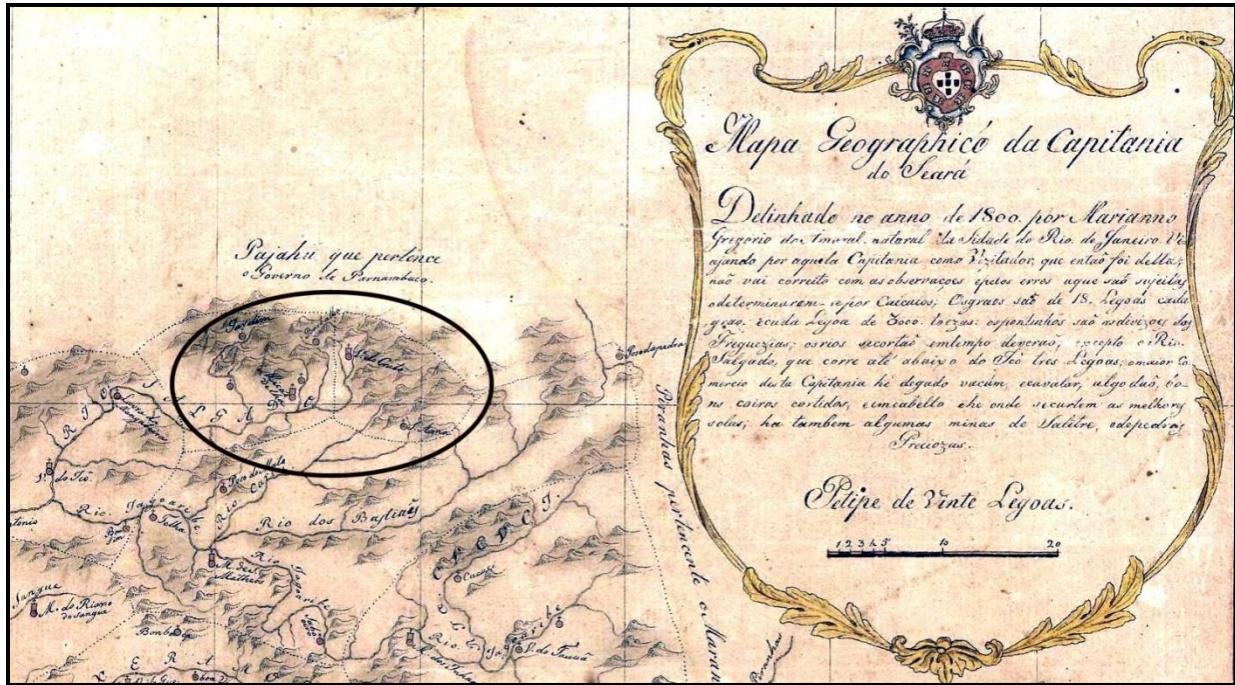


Figure 4.12: Cartouche and detail from *Mapa Geographico da Capitania do Ceara* (Amaral, 1800)⁷²

The emptiness of space on these maps led to wild speculations. Instead of images of indigenous life, cannibalism, warfare and fantasy creatures, the Portuguese mapmakers were eager to maintain the hope to find minerals and treasures in the backlands, as it had occurred in the southeastern captaincy of Minas Gerais (whose denomination of “general mines” was not given by chance). Portuguese authorities investigated these rumors in the middle of the eighteenth century. Gold was found in the Cariri region in 1752, but a regal order decreed six years later recommended a complete halt to prospecting and mining activities due to the poor

⁷² Permission by Fundação Biblioteca Nacional, Brazil)

results (Lopes et al., 2005). The Cariri apparently was not the *El Dorado* the Portuguese explorers were looking for.

Nevertheless, the myth of treasures left by the Jesuit priests and Dutch colonizers remained alive as can be testified by a strange manuscript that is part of the archives at the Instituto Histórico e Geográfico Brasileiro (IHGB) in Rio de Janeiro. The *Lamentação Brasileira* (“Brazilian Lamentation”) is a 6-volume “codex of a curious map of new discoveries” in Northeast Brazil written by Francisco Telles de Menezes (1799-1827), an “unworthy indigenous priest of Brazilian nationality and the most humble vassal” (Menezes, 1915, p.337) who had traveled the dry backlands of the North between 1799 and 1806 and registered any detail that might have been a hint to the occurrence of minerals and precious metals.⁷³ The Brazilian politician and magistrate Tristão de Alencar Araripe (1821-1908) observed that “the alleged priest was of indigenous race and [that] he qualified himself as poor Indian of Brazil. He had lived in the *sertões* of Ceará and Rio Grande do Norte for many years and traveled through them, dominated by the idea of [finding] money in coins and precious jewels” (Araripe, 1886, p.215).

The third part of the clergyman’s report supposedly includes a descriptive list of the locations where minerals and precious stones occurred. Menezes took notes of everything that proved the dreamed-of riches in the backlands, from rocks with inscriptions, metals (gold, silver, lead, iron) and precious stones (diamonds, rubies and topazes) to fine crockery, iron works, chains, nails that stuck in tree trunks, and even elephant bones (Menezes, 1915). The priest’s account is a repetitive what-is-where litany based on the “narration of ignorant and trustful persons who, in their rustic simplicity, informed the localities [of the treasures]” (Araripe, 1886, p.216). However, his descriptions are too vague and general to find the exact locations on a map.

⁷³ Due to the precarious state of conservation, I was not able to consult the original manuscript at the IHGB in Rio de Janeiro so that my sources were limited to the published transcriptions of the document.

In his report, Menezes also mentions places in the Cariri region where gold, gemstones, and other precious metals can be found:

(...) in the localities of Lagoa Secca and the Boa Vista Farm at the shores of the Salgado river there is gold; so is in Crato, in the Santa Clara height, the Mineiro creek, the Traíras creek; on the Dourado hill in Lavras there is much gold; in Crato in the small Eixu creek; in the Salamanca creek in Porteiras; in the Carneiro creek; in the João de Deus creek that comes from the Creole Hills and flows into the Lavras creek, there is gold leaf, that can also be found in a place called Lavras da Fortuna; they say that someone found a piece of gold in a creek close to a waterfall and that there one can hear the beating of drums under the earth; and that from this waterfall upwards and a few fathoms below there is a vein of gold that goes through the rocks; on the Araripe plateau, according to what an Indian said, there is a depression from where one can descend to a dry lake, from whose outflow one comes to another lake with water where the outflow of gold is in such a way that one can cut it with an ax; the author supposes that this lake flows to the Cariyu or Basteos river (Menezes, 1915, p.339-340, my translation).

Araripe may be right when he claims that “the reading of these notes is boring due to the monotonies of its facts,” a drawback that he finds even more aggravating when he takes into consideration that “large parts of the notes collected in this manner ... are not more than fantastic creations of minds that were exalted by a taste for marvels or preposterous fables” (Araripe, 1886, p.216).⁷⁴

Besides these speculative mappings, the Portuguese crown also had a special interest in planning issues under the influence of the so-called Pombaline reforms from the mid-1700s when Portugal started to pay more attention to the administration, fiscalization, systematic exploration, and fiscal and economic improvements in the Brazilian territory (Maxwell, 1995) Portuguese engineers were sent to the capitals along the coastline to organize urban life and map the backlands.

⁷⁴ Despite the dubious nature of the contents, members of the Instituto Histórico Geográfico Brasileiro used the manuscript of *Lamentação Brasília* as a strong argument to choose the province of Ceará as the main focus for the first Brazilian-only scientific expedition to the backlands in 1859 (see chapter 7).

Figure 4.13 is a detail of the map of the Captaincy of Ceará, elaborated for its governor Manoel Ignacio de Sampaio in 1818 by the Portuguese military engineer Antônio José da Silva Paulet (1778-1837).



4.13: Detail from *Carta da Capitania do Ceará* (Paulet, 1818)⁷⁵

The map shows the administrative division of Ceará into towns whose names are printed over the map in bold capital letters. The relief is indicated by hill symbols whereas a considerable number of rivers and creeks appear all over the map. The Cariri region includes the two towns of Crato and Santo Antônio do Jardim and several minor settlements that Silva Paulet describes in his *Abbreviated Geographic Description of the Captaincy of Ceará* (Paulet, 1897, p.94-97)

The French medical doctor Pierre (Pedro) Théberge (1811-1864) arrived in Brazil in 1837 and established himself in the town of Icó in 1848, north from the Cariri, further down the Jaguaribe River (Blake, 1900, p.35-36). Théberge's *Historical Sketch of the Province of Ceará* (Théberge, 1870) was published posthumously in 1870. About a decade before this, he had

⁷⁵ Permission by Fundação Biblioteca Nacional, Brazil.

elaborated a detailed chorographic map of the province (Théberge, 1861) in which Théberge represented the Cariri region in detail (figure 4.14). The main towns are underlined with light blue ink and marked by a circle with an inscribed cross (= church), with the exception of the town of Crato that, as ecclesiastic center of the region, is represented by an additional six-point star symbol. Other locales in the region appear with their names and smaller red dots or a cross on the sheet. The map space is very limited. The map reader can literally feel how Théberge had struggled to add place after place to the restricted writing space in his map. Whereas the road network (red lines) seems to be far too linear and schematic, the hydrographic network (drawn in dark blue or black ink) shows much more trustworthy details of the rivers and creeks. The Riacho dos Porcos (“Pig Creek”), the continuation of the Salgado River, meanders southbound around the Araripe Plateau and disappears close to the state border that Théberge indicates by a thick red line. The tablelands themselves are represented by ragged and crude hachure lines to emphasize the steep ascent to the plateau that is left almost without any geographic references.



4.14: Detail from *Carta Chorographica da Província do Ceará* (Théberge, 1861)⁷⁶

⁷⁶ Permission by Fundação Biblioteca Nacional, Brazil.

While Silva Paulet and Théberge responded to regional requests to map the province, the *Carta Corographica* (1846) by Conrado Jacob Niemeyer (1788-1862) already inserts the Brazilian northeast into the broader picture of a national frame (figure 4.15).

Born in Portugal as the son of a “Hanoverian Coronel” (Macedo, 1876, p.333), Niemeyer migrated to Brazil in 1808 and followed the career as a military engineer during which he “got involved in the grave political disputes of the first reign” (p.335), especially in Northeast Brazil. Within the project of the general chart of the Brazilian Empire, Niemeyer produced maps of the different provinces in the country.



Figure 4.15: *Carta Corographica (...)* contendo as provincias de Alagoas, Pernambuco, Parahiba, Rio Grande do Norte e Ceara (Niemeyer, 1843)⁷⁷

⁷⁷ Permission by Fundação Biblioteca Nacional, Brazil.

Figure 4.16 shows a detail of the map of the “Provinces of Alagoas, Pernambuco, Parahiba, Rio Grande do Norte and Ceará, dedicated to Emperor D. Pedro II.”



Figure 4.16: Detail from *Carta Corographica ...* (Niemeyer, 1843)

The Cariri region includes the towns of Crato, Barbalha, Jardim, Milagres and Missão Velha that are framed by mountain arcs from three sides. However, the east remains strangely empty like a flood plain. The Rio dos Porcos (“Pig River” this time) – which will be important for the reading of the following map – branches off the principal water course in Ceará, the Salgado River (“Salty River”). The lands south from the Araripe Plateau in the Province of Pernambuco are rendered as extension of the São Francisco River watershed. Further to the northwest where many of the smaller rivers originate, Niemeyer added the sentence: “backlands without culture and subject to severe droughts.” Macedo (1876) draws our attention to these mismappings when he observes that Niemeyer’s maps were

far from being a perfect work; faults and errors were daily making themselves more visible, even to their author, growing larger in number as the relative studies

became more refined. But the difficulty and transcendency of that work, and the urgent necessity there was for it, augmented its value, and caused its unquestionable merit to be acknowledged (Macedo, 1876, p.340).

An Exclusive Map of the Region: Macedo's *Mappa Topographico da Comarca do Crato*

All the maps discussed above represent the Cariri region as only a segment of space that is inserted into the state of Ceará, the Brazilian Northeast or even the entire country. The one and only historical regional map that exclusively depicts the Cariri, is the topographic map of the *Comarca do Crato* by Marcos Antônio Macedo (1808-1872).⁷⁸ This regional map represents the towns and smaller places that were under the jurisdiction of the lower court in Crato in the middle of the nineteenth century. Its author was born in the neighboring state of Piauí “in the middle of a half-savage Indian tribe” (Blake, 1900, p.219), studied social sciences and law and was elected representative in the state parliament of Ceará for several mandates, and judge in the *Comarca* of Crato. Macedo became interested in the regional geology and agriculture and even produced a report on the potential exploitation of carbon in the region (Macedo, 1905). The state government put him in charge of a survey that aimed to map the forests of Ceará and organize a mineralogical and zoological collection of the findings. However, due to health reasons, Macedo had to move to Europe where he searched for a treatment for his ailments and where he had the opportunity to undertake scientific excursions that led him to the delta of the Danube River and Upper Egypt (Blake, 1900, p.219; Macedo, 1867).

Inspired by the European “civilizations” and their technologies, Macedo proposed a large-scale project for the water supply in Northeast Brazil in which the Cariri region stood as a crucial element to bring the waters from the São Francisco River about 100 miles further to the south to the drier lands of the states of Ceará, Paraíba and Rio Grande do Norte (figure 4.17).

⁷⁸ *Comarca* is a judicial district in Brazil (Levine, 1979, p.59).



Figure 4.17: *Mappa Topographico da Comarca de Crato* (Macedo, 1871?)⁷⁹

In his short report on the carbon layers in the Cariri, Macedo corrected the erroneous idea that the south of Ceará was totally framed by mountain ranges. He carried out a topographic survey in which he was able to show that, different from the maps of the early nineteenth century, the Araripe Plateau is not a continuation of the Borborema Mountains further to the east (figure 4.18).

⁷⁹ Permission by Fundação Biblioteca Nacional, Brazil.



Figure 4.18: Detail from *Mappa Topographico da Comarca de Crato* (Macedo, 1871?)

He identified the town of Jardim as the gap that gently descends to the plains of the Riacho dos Porcos and the Baixio das Bestas (“lowlands of the beasts”, indicated in the map as *planícies muito baixas* – “very low lowlands”). This observation served as a strong point to propose a project for the construction of a canal to the São Francisco River. In 1871, a year before his death, Macedo delivered a detailed description of his ideas to the aldermen of the towns of Crato, Barbalha and Jardim (Macedo, 1987), including his topographic map of the *Comarca of Crato*, which in its long title aimed to indicate “the possibility of a channel drawn from the São Francisco River in the place of the Boa Vista town to communicate with the Jaguaribe River, through the Riacho dos Porcos Creek and the Salgado River and figuring as a map of a road to Icó and the sealing of the Boqueirão in the Salgado River.”

Macedo used his map to illustrate his project for the construction of a connecting canal to the São Francisco River. The river branches of the Jaguaribe/Salgado are drawn as vigorous

veins on the paper sheet. The eastern fork originates in the *Riacho dos Porcos* that circum-flows the Araripe Plateau. South from the town of Barra do Jardim and already in the Province of Pernambuco, the creek bends to the west. In one of the innumerable curves, Macedo added two parallel dashed lines that, in three straight segments, reach the town of Boavista at the shore of the São Francisco River.

His report did not only include information on the construction of floodgates and the hiring of specialized craftsmen from Germany, but was also an early critique of the land use in the Cariri region whose water resources had begun to dwindle due to inadequate use of the soils, especially cattle raising and slash and burn agriculture.

Macedo based his project on observations of the sophisticated and sustainable irrigation and water retention system in Wildbad on the shores of the Ens River in the Black Forest in Germany that he had the opportunity to visit during his stay in Stuttgart. For the Cariri he proposed a retention system that would gather the waters of all the creeks and small rivers in the region through the construction of 24 wooden floodgates that four specialists from Germany (a carpenter, a bricklayer, a blacksmith, and a hydraulic machinist), “unmarried and young in order to economize the [travel] costs with the fares for their families” (Macedo, 1987, p.91), would build within four years.

However, due to the high costs, Macedo’s project had never been put into practice, but there were other attempts to convince the government to initiate the construction of the canal. For example, figure 4.19 shows the hydrographic map for the “navigation and irrigation canal derived from the São Francisco River to the ocean through the Jaguaribe River in the Province of Ceará and through the valleys of the Piranha and Assu River in Paraíba and Rio Grande do Norte, with 4,554 kilometers of navigation” (Franklin, 1880).



Figure 4.19: Detail from *Mapa hidrographico de um canal de navegação e irrigação...* (Franklin, 1886)⁸⁰

The author of the map, the civil engineer Tristão Franklin, elaborated a short report to detail his ideas (Franklin, 1886). The Inspectorate of Works against the Drought (IOCS), founded in 1909, made another attempt to trigger the project with the help of American engineers who surveyed the lands between the Jaguaribe and the São Francisco River (figure 4.20). On the latter map, the town of Crato and the eastern part of Cariri are left in blank as if they did not exist. Both maps only represent the Cariri region as a secondary locale within the broader context of the canal.⁸¹

⁸⁰ Permission by Fundação Biblioteca Nacional, Brazil.

⁸¹ The idea of connecting the waters of the São Francisco River to the dry backlands in the Northeast has recently returned to the political debate on economic development in Brazil. The new proposal for the transfer of the waters entails about 400 miles of canal and a budget of nearly US \$ 2 billion (Prada, 2005).

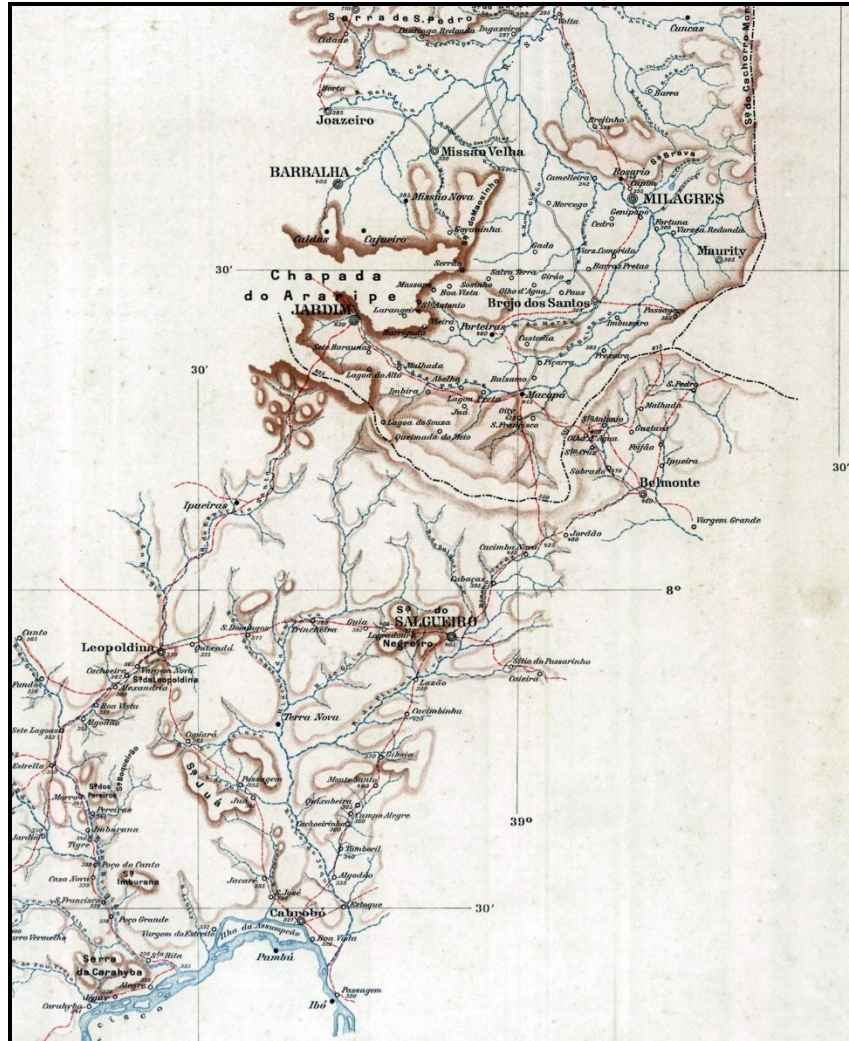


Figure 4.20: Detail from *Mapa referente ao indicado canal São Francisco-Jaguaribe* (Miller, 1913)⁸²

Modernity and Economic Development: The Place of the Cariri Region on the Map

With the better knowledge of the backlands in Northeast Brazil, engineers and planners initiated debates on how to improve the infrastructure in the *sertão* in the beginning of the twentieth century. The key to this development did not lie in the water ways, but in the expansion of the railway network in Brazil. Figure 4.21 shows a map of the “partial reconnaissance survey of the extension of the Baturite railway to the São Francisco River” (Brito, 1892), elaborated by the Brazilian sanitary engineer Saturnino de Brito (1864-1929).

⁸² Permission by Arquivo Nacional, Brazil.

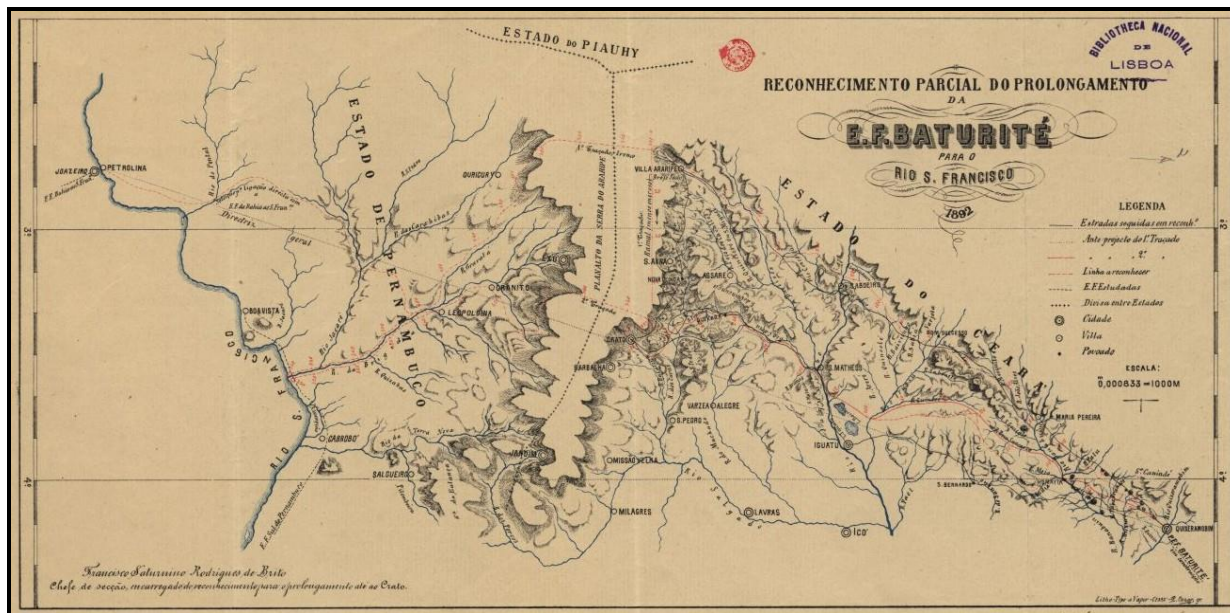


Figure 4.21: *Reconhecimento Parcial do Prolongamento da E.F. Baturite para o Rio São Francisco* (Brito, 1892)⁸³

Brito’s aim was to study the interior of Ceará in order to point out possible tracks for a railway that would connect the coastal capital of Fortaleza to the São Francisco River at the border between Pernambuco and Bahia. The map purposely excluded the existing part from Fortaleza to Quixadá (about 120 miles) in order to emphasize the trajectories of the network to be reconnoitered and studied. The top of the map is oriented to the west, probably due to the strip-like nature of the representation (21.90cm x 45.4cm) and the easier reading of the map contents from the left to the right and vice-versa. Despite a discreet pointed black line that cuts the Araripe Plateau in the middle of its spine to indicate the state border between Ceará and Pernambuco, Brito searched for a connection between the two states (figure 4.22).

Different from the project for the canal to the São Francisco River, the path of the railway did not bypass the mountain range, but proposed two “ante-projects” for routes straight over the tablelands (red pointed lines). Once “over the edge,” the railway would follow the beds of two

⁸³ Permission by Biblioteca Nacional de Portugal.

creeks till its final destination, the São Francisco River. Brito did not mention how the trains would overcome the steep ascent to the Araripe Plateau.

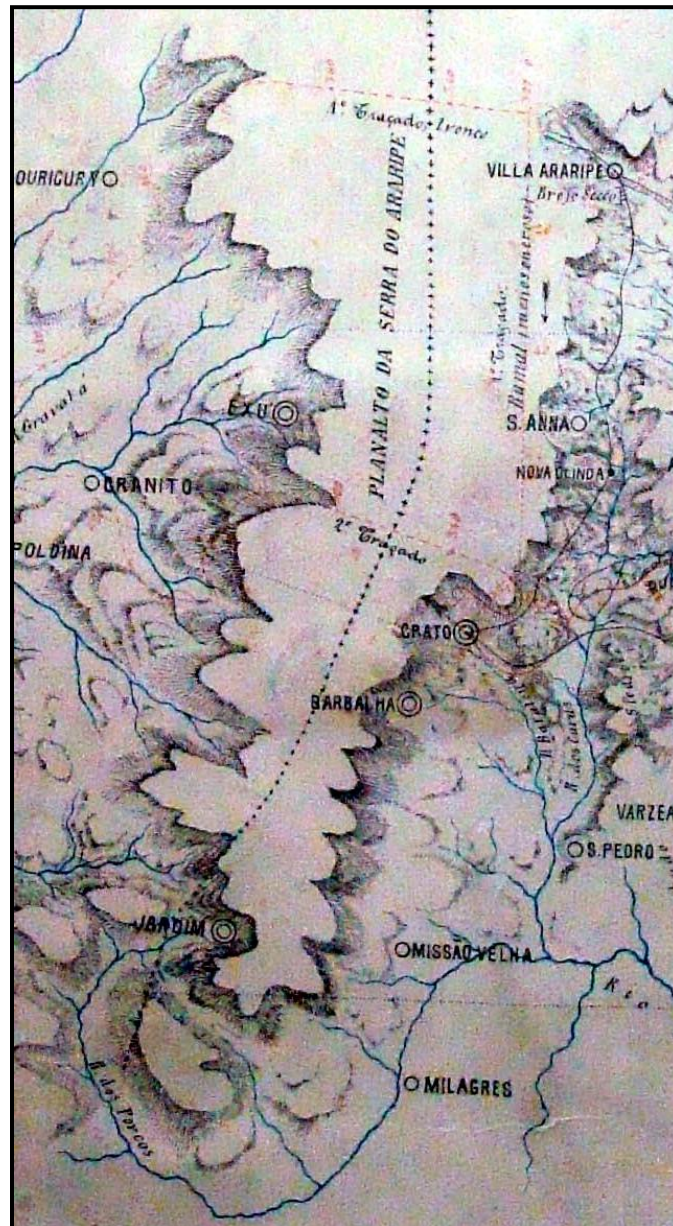


Figure 4.22: Detail from *Reconhecimento Parcial do Prolongamento...* (Brito, 1892)

This may be the main reason why the project remained “ante.” Thirty years later, the railway network in the State of Ceará would have rather different routes, as can be seen in a railroad map from the 1920s (figure 4.23). The map lists all the existing railway stations, their altitude, distance from the central station in Fortaleza, and the date of their inauguration. In 1924,

the year this “indicative map of the rail lines” was produced, the continuous red thread of the existing lines stopped in a place called Ingazeira, almost at the entrance to the Cariri region. The branch line to Crato had still been “under construction” and would only be inaugurated two years later on November 8, 1926.⁸⁴

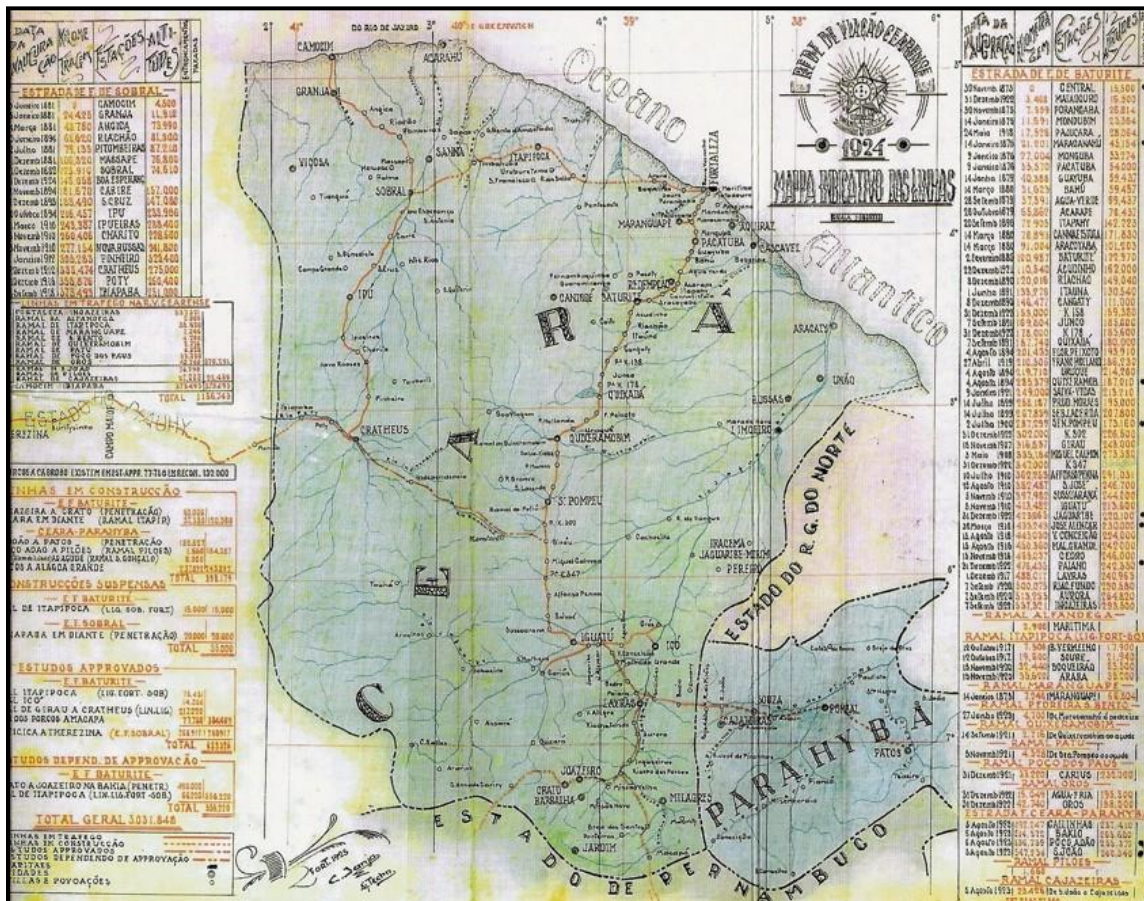


Figure 4.23: *Mapa Indicativo das Linhas, Rede de Viação Cearense (1924)*⁸⁵

In the first decade of the twentieth century, the “Inspectorate of Works against the Drought” (IOCS) initiated its activities as a federal institution that aimed to execute measures to protect and prepare the population for droughts and flooding. The mission included a wide range of projects from engineering works such as well-digging and the construction of dams

⁸⁴ The passenger train service in Ceará ceased its operation in the 1970s (Pereira & Lima, 2009).

⁸⁵ Reproduced from Pereira & Lima, 2009.

improved sanitation, support for irrigated agriculture, and financial and material help for regions affected by severe droughts. The IOCS invited foreign specialists to carry out surveys and projects in benefit of the *sertanejos* in Northeast Brazil. An example is the *Sketch of the Geological Map of the States of Ceará and Piauí* (1913), elaborated by the American geologist Horatio Small (figure 4.24).



Figure 4.24: Esboço de Mappa Geologico de parte do Ceará e Piauí (Small, 1913)⁸⁶

In his map, Small represents the state of Ceará as a vast plain of crystalline rocks, speckled with the contours of smaller mountains ranges or hills and dissected by a complex hydrographic network that omits the fact that most of the rivers and creeks in Ceará fall dry for more than six months during the year. Four areas are given special attention: a ten-mile strip that

⁸⁶ Permission by Fundação Biblioteca Nacional, Brazil.

covers the coast of the state, a small area around the town of Iguatu in the center of Ceará, parts of the Ibiapaba Mountains, and the Araripe Plateau. Small indicates these areas as “zones suitable for the drilling of water wells.” The tablelands in the Cariri region with their almost vertical cliffs stand out as a distinct brown area in the south of the state. Not the regional administrative and cultural boundaries, but the dominant presence of the Mesozoic plateau with its unique geology, vegetation, and hydrological regime determine the limits of the region. In most of the thematic maps that represent the physical aspects of the region and even on satellite images (figure 4.25), the tablelands literally stick out.

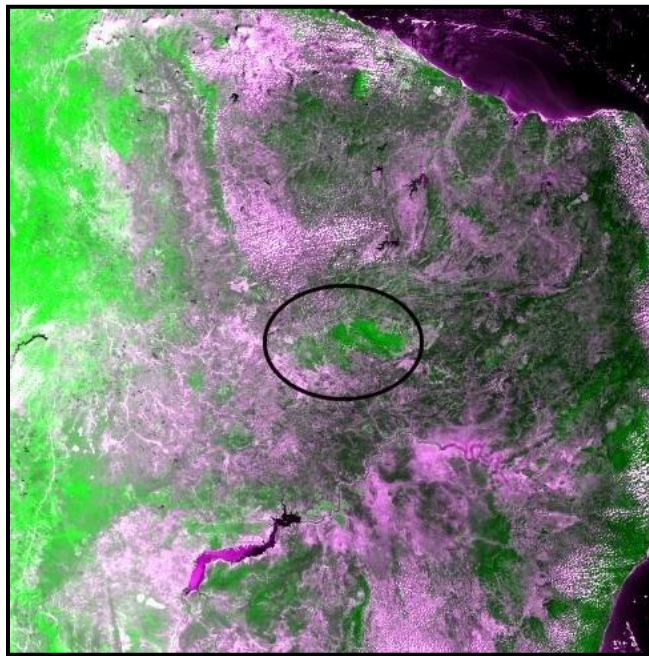


Figure 4.25: The location of the Cariri in a CBERS satellite image⁸⁷

However, other maps such as the sheet SB-24 of the International Map of the World on the scale 1:1,000,000 (revised edition from 1951) almost render the plateau invisible due to the use of light brown color nuances between 200 and 1,000m that are visually too similar (figure 4.26).

⁸⁷ CBERS 2, WFI, Image 151/108, 11-17-2004. All rights reserved by Instituto Nacional de Pesquisas Espaciais (INPE).

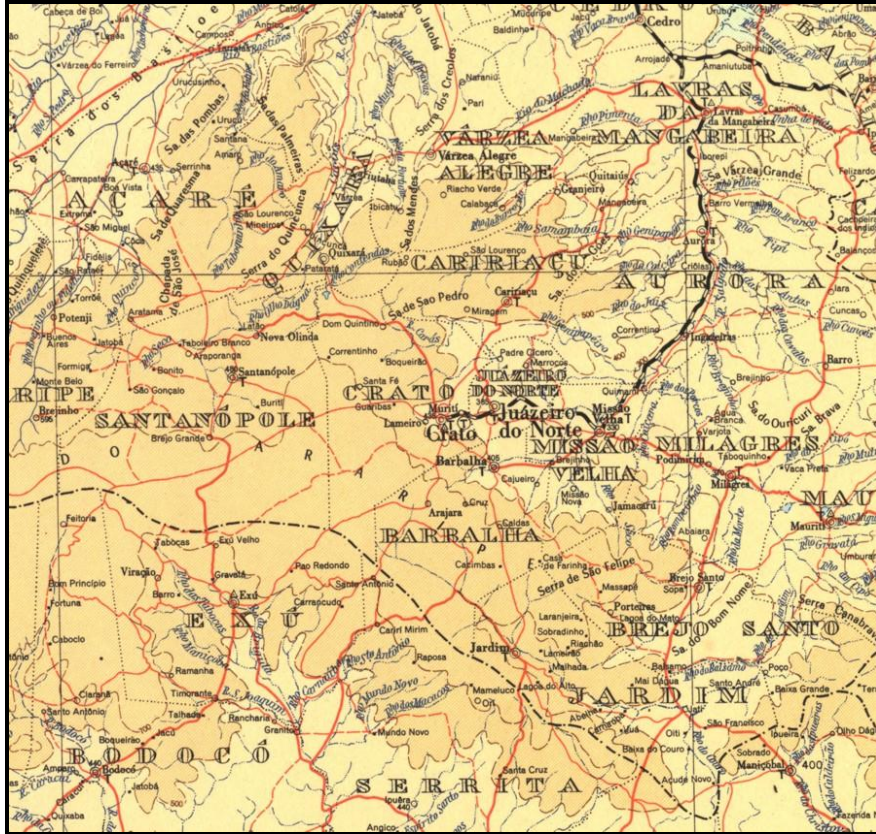


Figure 4.26: Detail from sheet SB-24, International Map of the World⁸⁸

The uniqueness of the regional flora and fauna attracted the German botanist Phillip von Luetzelburg (1880-1948)⁸⁹ who elaborated a “partial phyto-geographic map of the Araripe Mountains” for the IOCS in 1922 (figure 4.27). Luetzelburg surveyed the western part of the plateau and its foothills and registered details about the vegetation and the land use. While the top of the tablelands is represented as an almost “blank” space of dense forest (*matta*) with only two place names and a *casa de farinha* (simple shelter construction in which manioc flour is produced), the Cariri valley abounds with different colors that indicate the fertile pockets where

⁸⁸ Permission by American Geographical Society.

⁸⁹ Between 1909 and 1938, Luetzelburg spent longer periods in Brazil and carried out extensive studies of the flora in Northeast Brazil that he published in his *Botanical Studies of Northeast Brazil* (Luetzelburg, 1923). A distant relative of the Reichsführer-SS Heinrich Himmler, he returned to Germany in 1938 in order to initiate his activities as head of the department for the German *Ahnenerbe* (Simon, 2008), a Nazi institution that aimed to prove the superiority of the Aryan race and carried out eugenic experiments to procreate a “pure race” (Pringle, 2006).

cotton and sugarcane are planted in the middle of the characteristic shrub vegetation (*caatinga*) of Northeast Brazil. Luetzelburg added a vertical profile to his map in which he described the different geological layers, including those where fossilized fish species could be found.



Figure 4.27 *Mappa phytogeographico parcial da Serra do Araripe* (Luetzelburg, 1922)⁹⁰

The Regional Map as Political Discourse

Besides the detailed surveys of the Cariri and its natural resources, the region also turned into a political argument in the 1940s and 1950s. These maps were not used as representations of the region, but as visual complements for texts that called for a better administrative organization of the country and a greater regional autonomy of the region.

⁹⁰ Permission by Fundação Biblioteca Nacional, Brazil.

The project included the *State of Araripe* that was supposed to be composed of the southern part of Ceará and the western areas of the State of Pernambuco reaching the shores of the São Francisco River as its southernmost limits. With an area of about 37,000 square miles and a population of 750,000, the state would have the town of Crato as its capital. The map erroneously classified Crato as capital of a territory and not a state.

Spearheaded by the state representative and son of the region Wilson Roriz, a group of intellectuals created the “Central Committee for the State of Cariri” in 1957 with the purpose to “reclaim the rights of liberty – that is the Great Liberty of the Right” (Estado do Cariri, 1957, p.8). In a supplement of the regional cultural journal *Itaytera*, the vehicle of communication for the Instituto Cultural do Cariri (see chapter 6), several local personalities from Crato (among them priests, lawyers and journalists) initiated a discourse in favor of an independent state, including the presentation of a “hymn of the campaign for the State of Cariri” in order to trigger a regional patriotism and evoke the region’s revolutionary past of the nineteenth century (Estado do Cariri, 1957, p.7):

Immortal as the phoenix from the legend
Resonating from the mountains to the sertão
The idea of our grandfathers was born again
To release our beloved land
Liberty, we will fight for you!
The Cariri will be a state!
Redemption is our supreme desire
That one day will come true.
Go ahead, you heroes from the sertão!
Let’s build our future.
Let’s hoist our flag very high
So that our greatness will come
(Estado do Cariri, 1957, p.7).⁹²

⁹² The articles in the journal supplement frequently alluded to the first attempt to create an independent state in 1828. At that time the movement was seconded by the senator José Martiniano de Alencar who was born and the region and who presented the project to the state government in 1839. However, he turned it down himself when he

Different from Major Segada Viana's proposal, the "committee of propaganda" did not include territories from other states in their map, but only the towns from southern and south-central Ceará (figure 4.29).

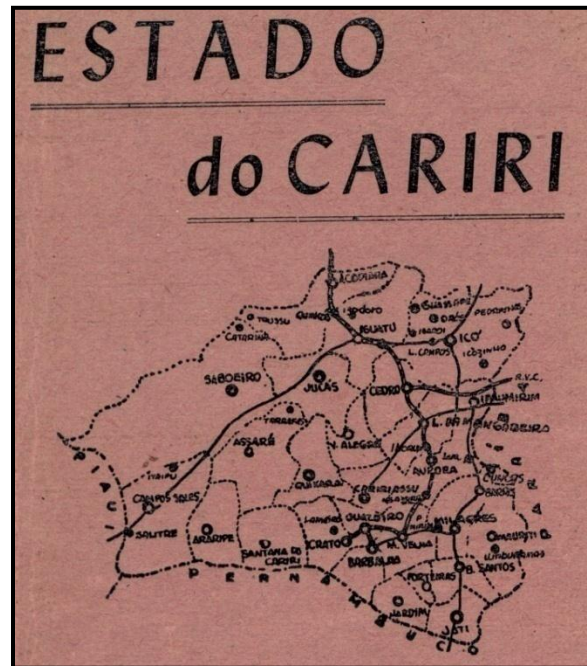


Figure 4.29 Cover of journal supplement on the creation of the State of Cariri (Estado do Cariri, 1957)⁹³

Despite the initial enthusiasm for independence, the proposed law did not gain the necessary support in the state legislature and was adjourned.⁹⁴ The map of the State of Araripe fell into oblivion.

became governor of the Province of Ceará in the following year (Estado do Cariri, 1957, p.3-5). Evidently he did not want to suffer any territorial losses under his own government.

⁹³Permission by Instituto Cultural do Cariri.

⁹⁴ In September 2009, the Northeast Brazilian writer Jota Alcides renewed these ideas when he claimed in a short comment in the newspaper *Diário de Pernambuco* that "the State of Cariri is the undelayable solution to save the beautiful and naturally rich Cariri Valley that has always been disrespected or maltreated by the [different] governments of Ceará (...). There is nothing to fear. It is better to be a small and poor state, but free and independent, the true holder of its destiny" (http://www.diariodepernambuco.com.br/2009/09/06/brasil4_0.asp). The comment spread quickly in the Cariri region and turned into the talk of the town in several blogs on the internet.

In the 1960s, the *Instituto Brasileiro de Geografia e Estatística* initiated a topographic survey of larger parts of the country that had been previously unmapped, including Northeast Brazil. The most detailed survey to map the continuous space of southern Ceará (and the Cariri region) is the topographic series on the scale of 1:100,000. Based on aerial photos from 1964, the Geographic Service of the Army (Serviço Geográfico do Exército, SGE) and the Superintendency for the Development of the Northeast (SUDENE) processed these images and converted them into topographic sheets in the late 1960s. The Cariri region is included in five different sheets that contain details about the hydrographic network, the relief, and anthropogenic features such as settlements, land use, roads, and administrative boundaries (detail in figure 4.30). These maps are frequently used for smaller-scale compilation maps or regional planning.

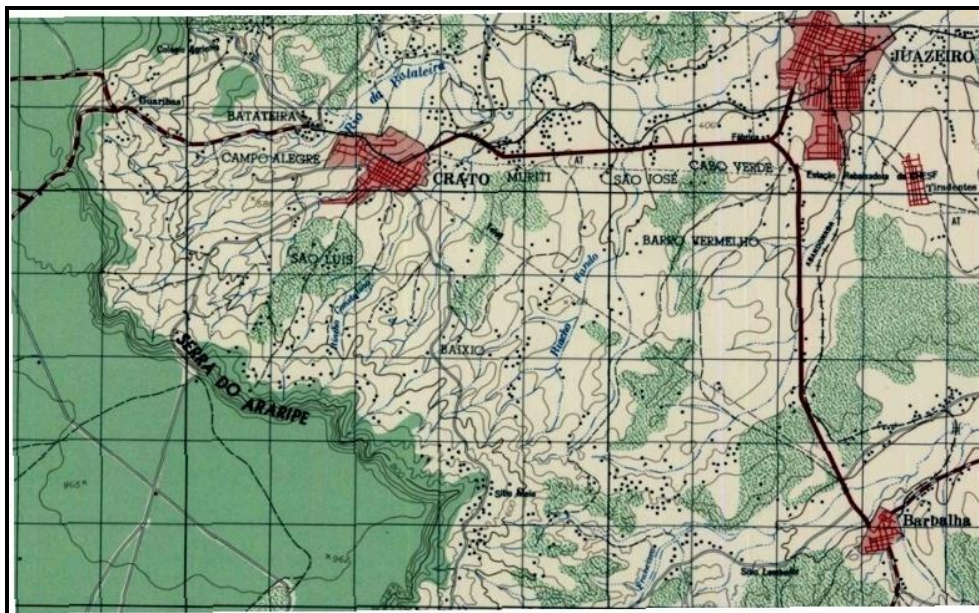


Figure 4.30 Detail from topographic sheet SB-24-Y-D-III Crato, original scale: 1:100,000⁹⁵

Besides the official maps that represent the Cariri region, there are cartographic representations which are not in circulation and which I call “gray maps”. These are frequently attached to technical reports, environmental zoning proposals, dissertations, or studies

⁹⁵ Permission by Serviço Geográfico do Exército.

commissioned for special purposes (surveys, tourism etc.). The main spatial unit, however, is not the Cariri região with its ambiguous delimitations, but the Araripe Plateau as central object of study for environmental planning and protection. Figure 4.31 shows the land use and vegetation of the protected area of the tablelands, based on the visual interpretation of LANDSAT satellite images processed with a GIS software.

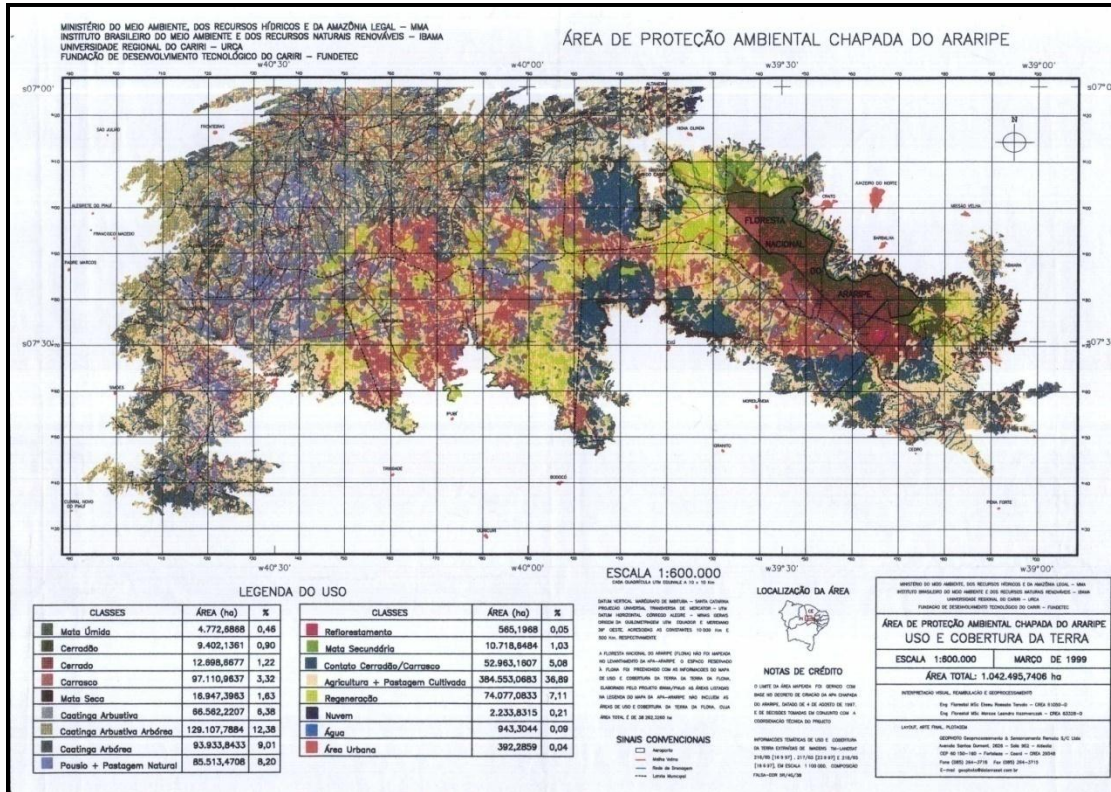


Figure 4.31: Land use and vegetation map for the protection area of the Araripe Plateau (IBAMA, 1999)⁹⁶

The project was executed in 1999 by federal institutions (Ministério do Meio Ambiente and IBAMA), a private survey company, and the Universidade Regional do Cariri. The map contains 17 different thematic classes, the road network, hydrographic features, and

⁹⁶ Permission by FUNDETEC.

administrative limits. Most of the human settlements remain outside the area since the focus is on the sparsely populated plateau and its physical characteristics.⁹⁷

During the last decade, cartographic representations of the Cariri have not only been produced for the reconnaissance, survey, and planning of and in the region, but also to present its uniqueness to the “outside” world. Especially the monetarily attractive tourism industry has invested in the image of the southern part of Ceará. Figure 4.32 is a sketch from a 14-page brochure with the title *Cariri, Ceará – Brazil: Land of Faith, Outstanding Culture, and Beautiful by Nature* (Anonymous, n.d.).⁹⁸



Figure 4.32 Tourism map of the Cariri region (Anonymous, n.d.)⁹⁹

⁹⁷ I retrieved this scanned map and two others (environmental degradation and zoning) from a hard copy at the regional university. After the environmental zoning project had been concluded, nobody in the region was able to open the digital files.

⁹⁸ The last part of the title alludes to a popular song by the Brazilian singer and songwriter Jorge Ben. The refrain of the song *Moro num País Tropical* is “I live in a tropical country, blessed by God, and beautiful by nature” (Ben, 1969).

⁹⁹ Permission by Édio Callou, Serviço Brasileiro de Apoio às Micro e Pequenas Empresas (SEBRAE), Regional Office Cariri.

The richly illustrated booklet presents the main reasons to visit the Cariri (religiosity, culture, ecology, business, and science) and describes the principal towns and their attractions, each written in one short sentence. A calendar of events lists the main cultural attractions throughout the year in the region. On one of the last pages, a map of the Cariri (represented as the south of the state) indicates with red-yellow doughnut symbols the towns that are part of the *Forum of Tourism and Culture of the Cariri*, a joint initiative of regional municipalities founded in 2004 (that most probably has paid for the production of the brochure).

The Araripe Plateau merely consists of its name and a thick black list that indicates the state border to Pernambuco. The town of Exu (and its rich cultural heritage), situated in the neighboring state, is included in the list of attractive places. The symbol of an airplane in Juazeiro do Norte and Campos Sales (the latter is only a precarious landing field in disuse) and the thick gray line of the major highways with their respective numbers give the impression of a well-developed transport infrastructure. In the lower left-hand corner, a set of four inset maps helps the reader to locate the Cariri in Brazil, the Northeast and the State of Ceará. The fourth inset map shows Juazeiro do Norte, the largest town in the region, as a reference point in the heart of the *sertão*. Distances to the different state capitals are added to underline the centrality of the region in Northeast Brazil.

Telling Cartographic (Hi)stories

The aim of this chapter was to present the Cariri region through the description and reading of cartographic documents and the contexts of their production. The maps I selected covered different time periods and were produced or reproduced by mapmakers of different nationalities, guided by different aims and plans. The European maps from the seventeenth and

eighteenth century were small-scale representations that served for navigation, the simple location of places, or as mere decoration. Blank spots on the maps were either filled with drawings or text elements that frequently referred to the indigenous population. Especially the less accessible inland areas (including the Cariri region) were not well described. In later maps such as Finlayson's *Geographical, statistical, and historical map of Brazil* (1828), speculation ceded space to information and education. Long descriptions of the country's history and physical geography accompanied some of the maps that were produced for the North American and European readers and had a more "sober" appearance. With the first national initiatives to map the Brazilian territory after the country declared its independence in 1822, the maps became focused not only on the totality of the national area, but also on provinces and macro-regions such as the Northeast. How could the emperor rule his country when he did not know it? Engineers and surveyors had to give answers to this question by filling in the blank spaces on the map and gather information about flora, fauna, culture, and natural resources. These maps served as instruments for the state, graphical proofs of the country's richness and visual documents to build a national (and not a regional) identity. Mapmaking from the second half of the nineteenth century onwards accompanied developments in other parts of the country and the world. Advances in surveying methods and cartographic techniques and products of modernity such as railways, highways, and water channels resulted in the complete cartographic coverage of the region. In a certain way, the sequence of the maps that in one way or another depict the Cariri can be considered an "evolutionary" coming-into-being, from small-scale pictorial maps with sparse details to present-day topographic map sheets freely available in pdf format on the internet.¹⁰⁰ The most interesting aspect in this discussion is how the Cariri emerged and

¹⁰⁰The Instituto de Pesquisa e Estratégia Econômica do Ceará (IPECE) has made downloadable versions of these maps available on its website (<http://www.ipece.ce.gov.br/categoria5/cartografia>).

consolidated itself on the maps. Cartography plays a crucial role in the process of literally putting the region on the map. In her poem *Legend with the word map*, The Brazilian poet Adélia Prado (1990, p.60) states that the map is the proof for the existence of a place. The map consolidates a place as a “fact” whereas the process of naming brings places into being, although the criteria for attributing names are far from being objective (see Carter, 1987). Using the words of Jean Baudrillard (1994, p.1), sometimes the map even precedes the territory: It is not the existing place that we can find on the map, but it is the map that can bring a place into existence. The power of these paper landscapes consists in their impact as reality-consolidating documents: If it’s on the map, it’s there, although the position on the map may be inexact or simply wrong, or the place merely fictitious. However, naming and “place-making” are powerful tools to bring space to life or undo places, regions and territories.

This cartographic history is not without gaps, but how many maps would be necessary for a “complete” study?¹⁰¹ The French philosopher Henri Lefebvre affirms that the number of maps would be infinite:

How many maps, in the descriptive or geographical sense, might be needed to deal exhaustively with a given space, to code and decode all its meanings and contents? It is doubtful whether a finite number can ever be given in answer to this sort of question. What we are most likely confronted with here is a sort of instant infinity, a situation reminiscent of a Mondrian painting. It is not only the codes – the map’s legend, the conventional signs of map-making and map-reading – that are liable to change, but also the objects represented, the lens through which they are viewed, and the scale used. The idea that a small number of maps or even a single (and singular) map might be sufficient can only apply in a specialized area of study whose own self-affirmation depends on isolation from its context (Lefebvre, 1991, p.85-86).

¹⁰¹ Only recently I found out about a map of the Province of Ceará from 1810 that a Brazilian urban planner had located in the Historical Archives of the Brazilian Armed Forces in Rio de Janeiro (Jucá Neto, 2007).

Most of the maps did not focus on the Cariri itself, but inserted the region in a broader context. The region has always been a by-product of or a secondary feature in cartographic representations in a smaller scale (Northeast or Brazil). There is no map with the title “map of the Cariri region.”¹⁰² Maps that exclusively represent it can be considered a rarity. Mapping initiatives have always been projects from the outside. With a few exceptions (for example, Macedo’s *Comarca* map), engineers or surveyors who lived in the Cariri did not map the region which is surprising when we take into account the iconic regional landscape and the visual dominance of the Araripe plateau that created a unique green spot in the middle of the dry backlands. Was the environment not spectacular enough to stimulate mapmaking? Most of the maps lack a regional dimension in the sense that they remain outside products without a direct link to the region and its histories and geographies.¹⁰³

For this reason, I have contextualized several of my selected maps in order to establish the link between the cold representation on paper and the real space. Put in other words, my aim was to connect the two forms of impressions I mentioned at the beginning of this chapter. Especially the second type – impressions as telling images – reveals the maps as social constructions and visual stories that are waiting to be told: “To ask for a map is to say ‘tell me a story’ (Turchi, 2004, p.11).¹⁰⁴ What at first glance may appear as a painstakingly detailed and chatty account of regional history and geography to the reader is in fact an attempt to “bring life”

¹⁰² The only reference that I found is a book with the title *Pequeno Atlas de Cultura Popular do Ceará: Juazeiro do Norte* (Instituto Nacional de Folclore, 1985). However, this publication is not a cartographic atlas, and only uses the term as a metaphor in order to present a list of regional cultural phenomena in the town of Juazeiro do Norte.

¹⁰³ Mapping projects from within the region focus mainly on the measurement of properties for cadastral surveys or sale and purchase, whereas cartographic studies from the outside stress the interregional interconnecting dimension, e.g. railway and road maps.

¹⁰⁴ During my general exams, one of my committee members, Dr. Miles Richardson, spread a large-scale topographic map of the Baton Rouge vicinities on the table and asked me how to let the map “speak” to us. I have literally followed his recommendation in this chapter.

to the maps by checking the contexts and narratives that they implicitly contain.¹⁰⁵ Returning to one of my initial questions for this chapter, the maps I read can tell us further details about regional (hi)stories and close some of the gaps in regional history and geography. Within this perspective, the maps served as triggers or gateways to the regional geography- and history rather than as complete storybooks. Each of them contributed to a certain extent to the cartographic history of the Cariri region that could be compared to an unfinished jigsaw puzzle. Any morsel of information helped to create this overarching “map”. Some of these maps (for example, the *Comarca do Crato* map by Macedo) had a stronger power to “emplot” regional narratives, that is, to link space and (hi)stories¹⁰⁶, whereas others such as the European maps from the eighteenth and nineteenth centuries remained detached from the regional reality. These cartographic (hi)stories can be used as a valid visual strategy side by side with photographs, paintings, and other documents to help unveil the meaning of places.

This case study of the cartographic history of the Cariri region may be used as an example for research in any other region or territory in the world, including those that – like the Cariri – seem to be unspectacular, ordinary, unattractive, or even boring to the outsider. Paraphrasing Paul Groth’s (1997, p.3) idea of cultural landscape studies, I would like to argue that ordinary, everyday regions and places are important and worthy of study and must be understood as

crucibles of cultural meaning and environmental experience. A critical word is *ordinary*. Everyday experience is essential to the formation of human meaning. When only monuments and high-style designs are taken seriously, the everyday environment is overlooked and undervalued (Groth, 1997, p.3)

¹⁰⁵ Harley (1990b) identified three different contexts for the interpretation of maps: the cartographer’s context, the relationship and comparison of a map to others, and the settings in society.

¹⁰⁶ For the discussion of the terms plot, emplotment, and narrative in history, see White (1978).

The contribution of this approach to geography and cartography is that

the selective analyses presented here of the social lives of maps contribute to the production of other histories of spaces and maps, to the recentring of attention on maps and mapping within disciplinary and interdisciplinary debates about spaces, and perhaps to a richer understanding of the social lives of maps in cartography itself (Pickles, 2004, p.xiv).

My reading between the lines of the maps related to the Cariri region revealed many different cartographic (hi)stories beyond the paper landscapes and stimulated a dialogue between the maps, their social lives, makers, and readers. However, the maps remained “impressions” and static material objects separated from the reader. For this reason, the next chapter will deal with the mental processes of mapmaking rather than with the finished products.

Chapter Five: Reading Mappings The Cariri Region on the Mind

Politick: “Map me no maps, sir, my head is a map, a map of the whole world”.

...

Dabble: “If your map be a map, it is a very erroneous one”.

(Henry Fielding, 1783, p.10)

Approaching the Cariri region through maps reveals details about the “making” and “coming into being” of the region and how planners, surveyors, and cartographers conceive its spatial configuration. However, as the previous chapter revealed, there are few maps that focus on the region itself. Almost always the Cariri is represented as part of a larger spatial unit (state, Northeast Brazil, or even the entire country). The few existing maps of the region are widely unknown or inaccessible to the population.

The initial quote for this chapter serves as an invitation to explore the maps of space and place that we carry in our minds. In this chapter, my aim is to complement my cartographic findings by investigating the maps in our heads that – according to the English playwright Henry Fielding – can reveal whole worlds in the same way as conventional maps do. Instead of approaching the Cariri through the cold and distant cartographic view of the region, I will use a cultural cartographic methodology that initiates with the inhabitants of the region and how they project their own mental maps on a sheet of paper. First, I will briefly discuss the concept of mental maps and their potential or possible use. Secondly, I will present a detailed analysis of mental maps drawn by undergraduate students from the geography program at Universidade Regional do Cariri. The main purpose of this cultural-cartographic methodology is to register a wide range of different ways and strategies that are employed to map and understand the region

(carto)graphically. This approach follows the recent debates on visual culture in the social sciences in which the making rather than the reading of images has gained more attention:

[I]t is important to note that there is a dispersed but persistent body of work in the social sciences that uses various kinds of images as ways of answering research questions (questions which may not be directly concerned with visibility or visual culture), *not by examining images but by making them* (Rose, 2007, p.6, my emphasis).

On Mental Maps

In an interview with the prestigious *Nature* magazine on May 29, 2009, the cognitive geographer Reginald Golledge stressed the importance of studies on internal geographic processes and stated that “the geography you carry in your mind, your mental map and the way you process spatial information, are just as important as recording the facts of human existence on the surface of Earth” (Gewin, 2009, p.877).

But, what are mental maps? Geographers and social scientists have been using a variety of different terms: mental maps (Gould & White, 1986), cognitive maps (Tolman, 1948), imaginary maps (Trowbridge, 1913), or “public images” (Lynch, 1979), just to mention a few of them. A useful definition is the following. According to the *Dictionary of Geography*, a mental map is

a map of the environment within the mind of an individual which reflects the knowledge and prejudices of that individual. Such a map reflects the individual’s perceptions of, and preferences for, different places and is the result of the way in which an individual acquires, classifies, stores, retrieves, and decodes information about locations (Mayhew, 2004, p.324).

Within this perspective, the study of mental maps is not restricted to the drawing and the final product itself, but also includes mental processes to conceive these thoughts and translate them into a material form. Mental maps are not just material structures, but also entail processes

of abstract spatial thinking that find their way onto a piece of paper. For this reason, there are different conceptions of how to define them:

- (1) Is it the case that the cognitive map *is* a cartographic map (Explicit statement)?
- (2) Is it the case that the cognitive map *is like a* cartographic map (Analogy)?
- (3) Is it the case that a cognitive is used *as if it were* a cartographic map (Metaphor)?
- (4) Is it the case that the cognitive map has no real connections with what we understand to be a map, i.e. a cartographic map, and is neither an explicit statement, analogy or a metaphor but rather an unfortunate choice of phrase: a convenient fiction? In effect just a hypothetical construct (Kitchin 1994, p.3, *original emphasis*).¹⁰⁷

Whatever the term used, these maps “explore *inner space*, a little known region of that dark continent inside man’s head”, whereas inner space refers to the representation of the geographical environment as it exists within a person’s mind. It is the world as people believe it to be” (Downs & Stea, 1977, p.4).

According to Muehrcke & Muehrcke (1998, p.5-6), mental maps are based on direct experience (personal and sensory), indirect influences (information through sources such as TV, conversations, photos, readings, etc.), and “extrasensory perception” that correspond to thinking processes in the mind. Especially the thought processes represent a powerful factor for mental maps:

You constantly ponder and modify the information you gather through experience. Much of what you *think* you know about your surroundings, therefore, is conjecture. Extrasensory perception also encompasses information gained through your imagination, fantasies, dreams, and hallucinations. You have little control over these sources of information, and you’re usually not conscious of the impact they have on your mental maps. Yet they shape your view of the world in the same way as do other information sources (Muehrcke & Muehrcke, 1998, p.6).

¹⁰⁷ For the discussion on mental maps as analogies or metaphors, see Downs (1981), Graham (1982) and Kuipers (1982).

Downs & Stea (1977) stress that mental maps are personal understandings of the world that may be or may be not maplike, and bear a likeness to real space:

Most importantly, a cognitive [mental] map is a cross section representing the world at one instant in time. It reflects the world as some people believe it to be; it needs not be correct. In fact, distortions are highly likely. It is *your* understanding of the world, and it may only faintly resemble the world as reflected in cartographic maps or color photographs (Downs & Stea, 1977, p.2).

The same authors differentiate between a cognitive map and cognitive mapping.¹⁰⁸ While “a *cognitive* [mental] *map* is a *product* – a person’s organized representation of some part of the spatial environment” (p.6), “*cognitive mapping* is an abstraction covering those cognitive or mental abilities that enable us to collect, organize, store, recall, and manipulate information about the spatial environment”. In other words, “cognitive mapping refers to a process of *doing*: it is an *activity* that we engage in rather than an object that we have. It is the way in which we come to grips with and comprehend the world around us” (p.6, emphasis in original).

Research with mental maps has traditionally been related to cognitive psychology and been considered as “one of the principal concepts of behavioural geography, referring to the psychological representation of places as revealed by simple paper and pencil tests” (Ley, 2000, p.498). As a reaction to environmental determinism, these studies generally aimed to quantify data and deduce models concerning human-environment interaction, place preferences and environmental perception. Gould & White (1986), for example, focused less on the mental maps themselves than on the cartographic visualization of geographic knowledge, spatial preference and residential desirability that *result* from mental maps and that are represented by isolines (isopleths, or lines with places to which the same value or characteristic is attributed). Pocock (1976) proposed a classification of mental map types based on an empirical sample, whereas

¹⁰⁸ This differentiation echoes my discussion on maps and mappings in chapter 3, when I mentioned the conception of maps as a processes rather than products.

Murray and Spencer (1979) investigated the relationship between cognitive mapping and an individual's geographical mobility. In the 1970s, many publications on mental maps included a considerable number of tables based on complex statistical calculations and cross tabulation, not very familiar to scholars with a less solid background.¹⁰⁹

Different from the quantitative approaches used in behavioral geography, the following map exercise seeks to explore qualitative aspects of mental maps that I do not conceive as products, but as processes (Rundstrom, 1989) that must be revealed and decoded in order to capture the making and spatial reasoning behind the drawings.¹¹⁰

Cultural Approaches to Mental Maps

During the last two decades, Cultural anthropologists have studied maps and map use as part of their empirical fieldwork and as a research method (e.g. Orlove, 1993, 2002; Pandolfo, 1989; Pandya, 1991; more recently Brand, 2006).¹¹¹ While Pandolfo (1989) investigated the “logic of a way of imagining space, movement and the body in a village in pre-Saharan Morocco” (p.3) through the lens of a single map drawn by a male villager, Pandya (1991) asked his informants from the Andaman Islands in the Indian Ocean to draw cosmological maps

¹⁰⁹ This refers to Pocock's (1976, p.501) table showing the “map sophistication and respondent variables” through the “probabilities of χ^2 values” with a “2 x 2 contingency” and to Murray's and Spencer's (1979, p.388) “comparison of scores between groups of mappers with different mobility, indicated by a “Kruskal-Wallis one-way analysis of variance.”

¹¹⁰ This study on mental maps is a continuation of my previous research on environmental perception (Seemann, 2003b), (carto)graphic communication strategies (Seemann, 2003a), and the interpretation of children's world maps (Seemann, 2006b).

¹¹¹ Franz Boas's research on *Geographical Names of the Kwakiutl Indians (1934)* should be mentioned as an early example of mapping in cultural anthropology. Boas aimed to show the relations between place names, indigenous culture, and morphology, and included 22 sketch maps with the location of all the places mentioned in the appendix of his book.

including the “places” the humans go after death.¹¹² In her research in a historically black community in Virginia, Brand (2006) analyzed a map drawn by a local white man. The map was literally “whitened out” in the sense that the author presented an exclusively white community by omitting any reference to the African-American social terrain.

Different from other authors, Orlove (1993) refers to “official” representations and mental maps and proposes a framework of “two complementary ways” to analyze them: an analysis of form and an analysis of practice. The first method aims to examine, classify, and relate the different features represented in the map, and investigates which details are included or excluded in the representation of a particular landscape. For Orlove, this study of the “ways in which people draw maps” also provides clues to the identity of the people who produced the maps. The analysis of practice, on the other hand, includes the map viewers within their context: How do they make use of maps? What social and cultural categories for maps do they create?

Orlove reminds us that the two types of analysis are complementary. The analysis of form seeks to analyze how people *draw maps*, while the main concern in an analysis of practice is to find out how people *draw on maps*. Orlove uses this word play to merge two processes in his studies: *draw* means “produce a likeness or representation of by making lines on a surface,” whereas *draw on* can be defined as “use as a source of supply.”¹¹³

In his study, Orlove only took into account the map reading and not the processes related to the mapmaking and the involvement of the mapmakers, due to the fact that he did not have the

¹¹² The drawing of lines on a sheet of paper with a pencil, an essentially occidental way of mapping reality, was easily assimilated by the Andamanese since their cultural tradition emphasized body paintings, that is, the drawing of lines on their bodies.

¹¹³ Merriam-Webster’s Collegiate Dictionary (2003, p.379).

opportunity to be present when the maps were made (in the late 1970s/early 1980s). My research will give a stronger emphasis to the “mapping in action” in a somewhat different context.

Whereas Orlove’s focus was on the reading of map products of a well-defined area (the Peruvian shore of the Titicaca Lake), my focus is on the mapmaking process of an area that can be considered a regional mentefact or even a discourse rather than a fixed spatial unit. Orlove’s concern was about human-environment relations and divergent interest conflicts, mine is about regional awareness and identity.

Mental Maps of the Cariri Region

Research on mental maps tends to give preference either to a local scale (mapping of neighborhoods or smaller administrative units, e.g. Lynch 1979) or a very small scale (world maps, e.g. Saarinen, MacCabe & Morehouse, 1988; Pinheiro, 1998). While a cartographically large scale allows us to map details such as houses, local marks of reference or even ephemeral phenomena, mental maps in a global scale provide information on different worldviews, political attitudes and map projections.

In the case of the Cariri, the study is in a “medium” scale that permits the inclusion of local or personal features *and* political boundaries. Different from international borders or neighborhood territoriality, regions such as the Cariri are defined in a large variety of ways which renders a one-map-solution for representation impossible. The region is a mentefact or an “image region” which can be defined as “an area whose character and uniqueness rest in the mind alone” (Watson, 1971, p.31-32).

Based on Orlove’s framework for an “ethnography of viewing,” the interpretation of the mental maps I collected from the Cariri region for this research will entail three different criteria:

- (1) A description and discussion of formal aspects: What is in the maps? Which techniques and materials are used?
- (2) An analysis of the contents: What is represented in what manner? How are ideas of the Cariri region represented cartographically?
- (3) Ethnographies¹¹⁴ of mapping and mapmaking: How are the maps produced? In what context or setting?

At first glance, my painstakingly detailed description of forms and contents may be questionable (or tiresome) to the reader. However, any small feature, be it a point, a line, a word, or a specific arrangement of elements on the sheet of paper, can contribute to the understanding of the cartographic culture (Edney, 1997; see also chapter 3) and the regional geographies and (hi)stories of the Cariri since they are linked to the mapmakers' lived experience in and his or her spatial conceptions of the region. These ways of thinking, perceiving, and representing the region help to identify aspects of the third criterion I mentioned above, regional ethnographies of mapping and mapmaking. This also means a direct engagement in the mapping exercise and a reading "between the lines" to understand why maps have been drawn in a particular manner. The reading of these mappings does not only entail the finished product, but also the processes of production and the educational and cultural contexts in Brazil, particularly in Northeast Brazil.

Research on Mental Maps as Cultural Geography in Practice

During the months of June 2008 and June and July 2009 I collected 355 mental maps drawn by undergraduate students from the geography program at Universidade Regional do

¹¹⁴ I opted to use the plural form of the word in order to point out that there are multiple ethnographic descriptions and interpretations rather than a single version. In my observations on the following pages, narratives, readings, and speculations overlap.

Cariri, most of them in the age group between 18 and 22. I visited 20 classrooms and asked the students to draw *their own* maps of the region in such a way that other people would be able to read and understand the cartographic contents.¹¹⁵ The exercise took between 10 and 25 minutes, depending on the group dynamics and the students' cartographic interests or even their fears to visualize their regional conceptions on a sheet of paper. Some faculty members took part in the survey, too.¹¹⁶ On six occasions, I was able to record the undergraduates' "cartotalk" in the classroom, moments in which the students discussed their drawings with each other. During the rather noisy conversations, many of them admitted that they had never drawn a map of the region and that they would not be able to do it. However, in the discussions with their colleagues, many of these first-time mapmakers managed to trace several timid point, line, and area features starting with the places that were familiar to them.

In order to make the reader familiar with the cartography of the Cariri, I have added a location map of the region that shows boundaries, limits and the names of the towns and places that the students mentioned in their mental maps (figure 5.1). With a few exceptions, these are the names of municipal seats.¹¹⁷ More locally important places such as districts, particular locales, or other spatial references are rarely included in the drawings.¹¹⁸

¹¹⁵ The research project for fieldwork was submitted to and approved by the Institutional Review Board (IRB) at Louisiana State in spring 2008. The students were asked to write their names, age, home town, and course semester on the back of the paper in order to obtain a general idea of the mapmakers' background in this study. The authorship of the mental maps I will discuss on the following pages will remain anonymous.

¹¹⁶ I myself have been a faculty member at University Regional do Cariri since August 2002. As responsible for the area of "instrumental geography" (cartography, remote sensing, and GIS), I have had the opportunity not only to reflect about cartographic contents, education, and learning difficulties, but also about cartographic culture in a regional context. Some of the students who drew mental maps for me attended my classes before I left for my graduate studies at LSU in August 2006.

¹¹⁷ The administrative space in Brazil is divided into *municípios* (municipalities) that are subdivided into districts. It is very common to find a municipality that has a district with the same name. For example, Crato is a *município*, but also a district within the *município*.

¹¹⁸ Why are "smaller" place names left out in the mental maps? The students understood that the exercise was on a regional scale that required information on a regional level. The results would have been different if they had to

maps (e.g. scale), but most of them were included in most of the drawings. Authorship was indicated by the student's name on the paper sheet.¹²⁰ In the mental maps that the undergraduate students produced, many basic elements such as the title were left out, while some mapmakers were eager to show their cartographic training and knowledge by adding legends, themes or personal statements. Before the execution of the exercise I made the students aware of the “readability” of their drawings and asked them to draw their maps in a way that other people would be able to read and understand the cartographic contents.

As for the denomination of their maps, few students wrote a title on their sheets. Taking into account the scarcity of titles in the map, there is a surprisingly wide range of names among the few cases, including expressions without frills such as *Cariri*, *Cariri Region*, *Map of the Cariri*, *Map of the Cariri Region*, *Map (Cariri region)*, *Cariri in Ceará*, or *Map of the Cariri in Ceará*. In some cases, the name of the region was written with a K instead of a C, e.g. *Map of the Kariri*, *Land of the Kariris* or *Kariri – Land of the Dinosaurs*.¹²¹

Other students chose a thematic title to be added to their maps: *Map of the Touristic and Cultural Attractions in the Cariri*, *Geo-environmental Cariri*, or *Thematic Map: Principal Towns of the Central Cariri*. Yet other students stressed the insertion of the region in the state of Ceará when they chose titles such as *Map of Ceará*, *Ceará-Brazil* or even *Extreme South in the State of Ceará*.¹²² The denomination is not always clear: *Cariri Tablelands*, for example, is a non-existent expression that mixes up the Araripe tablelands and the Cariri region. More local

¹²⁰ Although the students were asked to provide their information on the back of the sheet, some of them used the space above, under, or next to their maps. Not all students provided these data.

¹²¹ The K is commonly used to emphasize the indigenous past of the region. Indigenous names frequently contain the letter K that is not part of the Portuguese alphabet. There is also a local *cachaça* (sugarcane rum) brand with the name Kariri.

¹²² I noticed in several maps that the students emphasized the position of the Cariri in the “extreme south” of the state. However, in many drawings, the region was not tangential to the state border.

conceptions of the region include *Region of Crato* (one of the main towns), CRAJUBAR, *The Location of CRAJUBAR in the Cariri Region*, or simply *The Crato*. Examples for more personalized titles, but not necessarily more detailed contents are *My Cariri*, *My Map of the Cariri Region*, or *Towns of the Cariri that I have already visited*. There are also cases such as *The Imaginary Cariri* and *A Summary of the Cariri* or rather schoolmastery titles such as *Catalogued Areas According to Their Cultural, Economic and Social Potentialities*.

Cartographic conventions generally urge the mapmaker to indicate the direction of the geographic north. However, in the words of the Portuguese writer José Saramago, “there is no law that says we cannot live without the north” (Saramago, 1996, p.273). Only a few students added a north arrow, either because they generally thought that the north on the top was taken for granted, or the mapmakers did not see any necessity in including the arrow or a compass rose. In some cases, these map elements were far more elaborate than the regional geographic contents (figure 5.2).

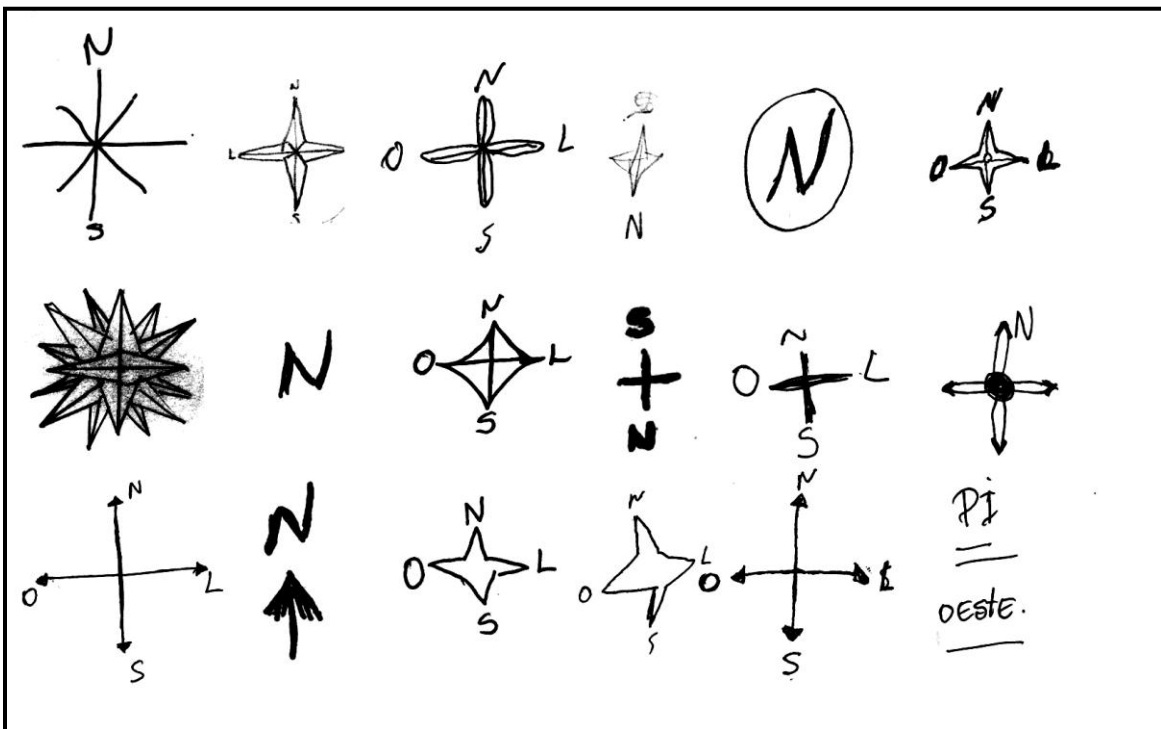


Figure 5.2: Examples of north arrows in the mental maps

There are several maps that point to other directions. The west or east was probably chosen because the student imagined a bus ride from his/her hometown in one of the extreme points in the region to the campus of the regional university in the “central” part of the Cariri.¹²³ Maps with the south on the top simulate the view of the Araripe Plateau from the towns of the Cariri. The green wall of the tableland could have given them a better orientation than the geographic north.

Mental maps typically do not have a scale, since they are not based on measurements and coordinate systems. Even so, two students showed their concern with scalar issues in their drawings. One of them mentioned that he did not know the scale of his map (*scale: ?*), while the other drew a fictitious graphic scale for his regional map below two “shaky” models of a wind rose. The scale-bar consisted of a freehand pen-line that was divided by a dot in its middle. At the left and the right tips, the values 50 and 1000 (without any unit) were written respectively.

Some of the students aimed to explain the graphic elements in their maps by the use of a legend. Pictorial elements (characteristic symbols for towns or phenomena) and cartographic conventions (e.g. border lines, town symbols, and quality of highways) are examples of this symbolization process. In the examples below, small icons stand for towns, conventional symbols such as the doughnut (⊙) and the double line represent towns and two-lane highways, and customized signs indicate socio-economic activities such as cultural and ecological tourism (figure 5.3).

Another formal aspect is the use of text elements on the map, principally place names and their (in)correct orthography. Many students misspelled town names. Letters were left out or

¹²³ Along the semester more than 50 buses fill the parking lot of the regional university during the classes in the morning and the evening. Students come from the neighboring state Pernambuco or places such as Campos Sales, almost 100 miles away. Besides the R in its name that stands for “regional, the Universidade Regional do Cariri is a state university.

added (*Assaré-Asaré-Assaré; Missão Velha-Missão Velha- Missa Velha*), or even entire syllables were included or “forgotten” (*Santatana* or *Santa* instead of *Santana do Cariri*).

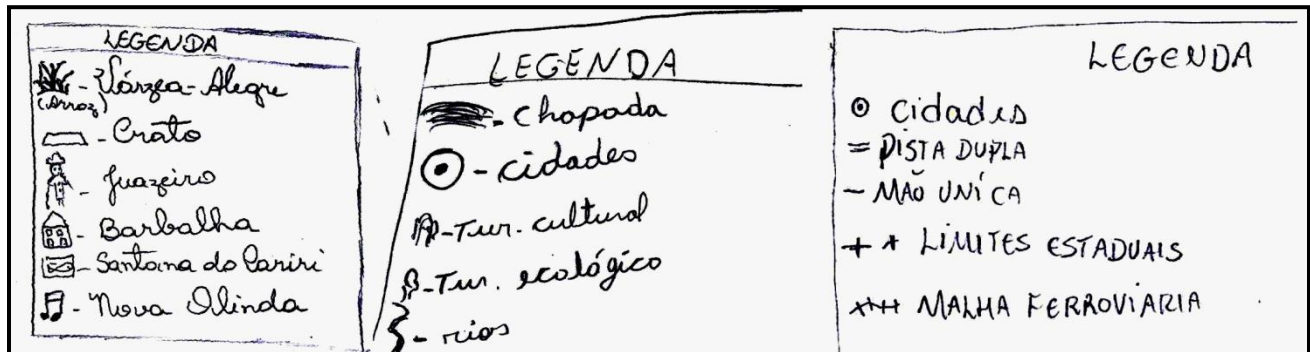


Figure 5.3: Examples of map legends

These orthographic errors could have been the result of a wide range of factors, from lack of attention or concentration and the difficult spelling of some of the place names to the nasal character of the Portuguese language¹²⁴ and the common acceptance of popular, but wrong written forms.

In the case of the town of Potengi, an indigenous name meaning “shrimp river,” the n is nasal and almost silent, while the g has the same sound as j. As a result of this there are six different versions: *Potegi*, *Potenji*, *Potengio*, *Pontegi*, *Ponetengi* and *Ponteng*. Caririçu led to corrupted versions such as *Caririçu*, *Caririaçul* (the l in a word sound like a u), *Caririasul*, *Cariri a Sul* (“Cariri to the south”), *Cariraçu*, *Carira Açu*, *Carirri Asul* and *Cariaçu*. Especially longer expressions and places consisting of two words are a major source of error: Writing the name of *Várzea Alegre* (“happy floodlands”) on the map resulted in 11 different variants of the toponym!

Most of the maps are pen drawings, either black or blue ball-pen, in some cases red or green. Some of the students used correction fluid and erasers to undo lines or place names. The wiped-out text frequently remained legible. In technical terms, these are vector drawings (in

¹²⁴ Especially words containing vowels with a *tilde* (e.g. *ão*) or n or m turn into a challenge in written Portuguese.

opposition to raster images such as aerial photos, satellite imagery, etc.) that consist of points, lines, and polygons. The latter feature was the preferred form of drawing in many maps. The polygons appear like “pigeonholes” or bubbles which the student added to a jigsaw-puzzle-like map of the region and which they sometimes combined with points to indicate the (symbolic) location of a place, or with lines to register the main highways and the connectivity between the towns.

Analysis of Content

The second part of this interpretation deals with the contents of the mental maps. How did the students represent the Cariri cartographically? Or in other words, what is represented and how is it represented? I classified the maps according to their scale and “regionality.” As for the first criterion, the students showed a different spatial emphasis in different scales. While some maps are mere location maps inserted in a wider context (state, Northeast Brazil, country), others literally cut out the region as a “stand-alone,” almost island-like spatial unit. A more regional scale allowed the mapmakers (not all of them) to include more details and regional features on their sheet of paper that could not be included in a smaller scale due to the space restrictions.

South-of-the-State Maps

One form of representation is the south-of-the-state map. The students drew the region within a broader spatial context (state borders, position within the state) and added (or not) place names and internal boundaries between the towns. The simplest form of representation is an outline map of the state of Ceará that inserts the region in the southern part (figure 5.4, left). The map reproduces the official definition of the meso-region “Southern Ceará” (*Sul Cearense*) that

consists of the five micro-regions Barro, Brejo Santo, Cariri, Caririagu and Chapada do Araripe (figure 5.4, right). This spatial scheme was not a challenge for the majority of mapmakers.

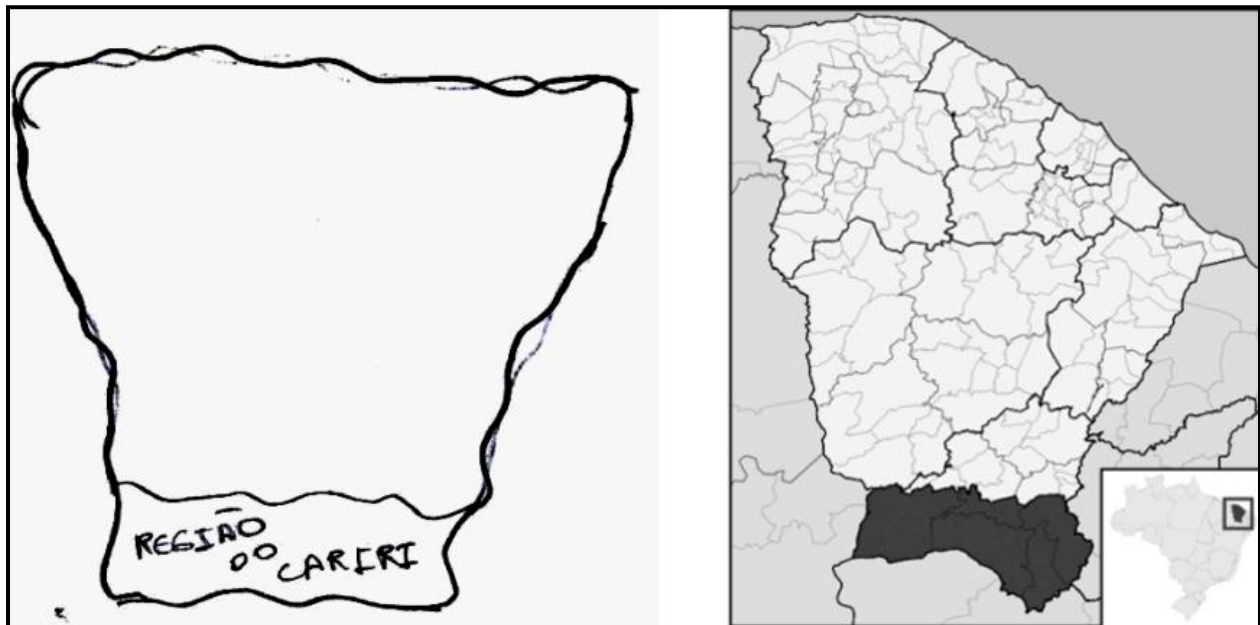


Figure 5.4: A simple south-of-the-state mental map compared to an official map of the meso region¹²⁵

Figure 5.5 (left) shows a stronger concern with contents and form. The student only traced the borderlines of the state, added the state capital Fortaleza, and placed the name Cariri in the southern part of Ceará. The borderlines almost perfectly correspond to the official shape. A closer look at the map shows eraser marks on the paper sheet. The student seems to have drawn initially a clumsier and less accurate outline map with the same two names. Possibly she got hold of a template map in a textbook or a personal agenda that she was able to copy in freehand. Figure 5.5 (right) is an even more general insertion of the region into the Brazilian Northeast. The Cariri is positioned in the south of Ceará state, but it transcends the state boundaries and reaches smaller parts of the neighboring states of Piauí and Pernambuco. A freehand north

¹²⁵ The map is extracted from the Wikimedia Commons and available at http://pt.wikipedia.org/wiki/Ficheiro:Ceara_Meso_SulCearense.svg.

symbol that indicates the four cardinal directions is added more than two inches beneath the drawing.

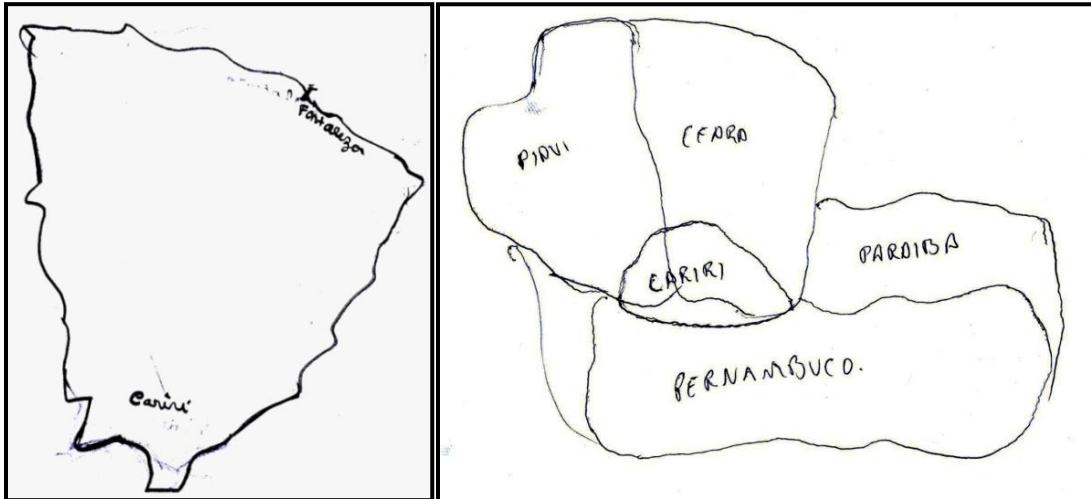


Figure 5.5: The Cariri within the state and Northeast Brazil

The representation of the Cariri becomes even more central in a map that shows the region as an independent administrative unit as if it were a state (figure 5.6) south of the state to which it belongs (Ceará). The student felt the necessity to add a short statement written as a header to her map:

The Cariri region stands out for its similarities. There is characteristic climate and vegetation, but what really defines and principally constitutes its borders is the cultural identity.

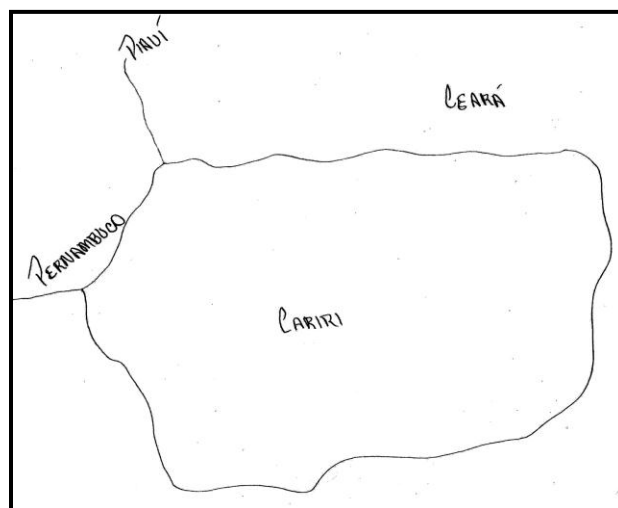


Figure 5.6: The Cariri as a “state”

Only one student drew a “multidimensional” map, i.e. the region within its state, and its state within Brazil and South America (figure 5.7). The spatial dimensions of the Brazilian territory, represented in rough outlines that contain an enormous blank space, downplay the importance of the Cariri region as a part of one of the 26 Brazilian states. Due to the limited space for the inclusion of place names, the student drew symbolic dots, each one connected to an arrow that points to the respective town names (not all in a correct position).

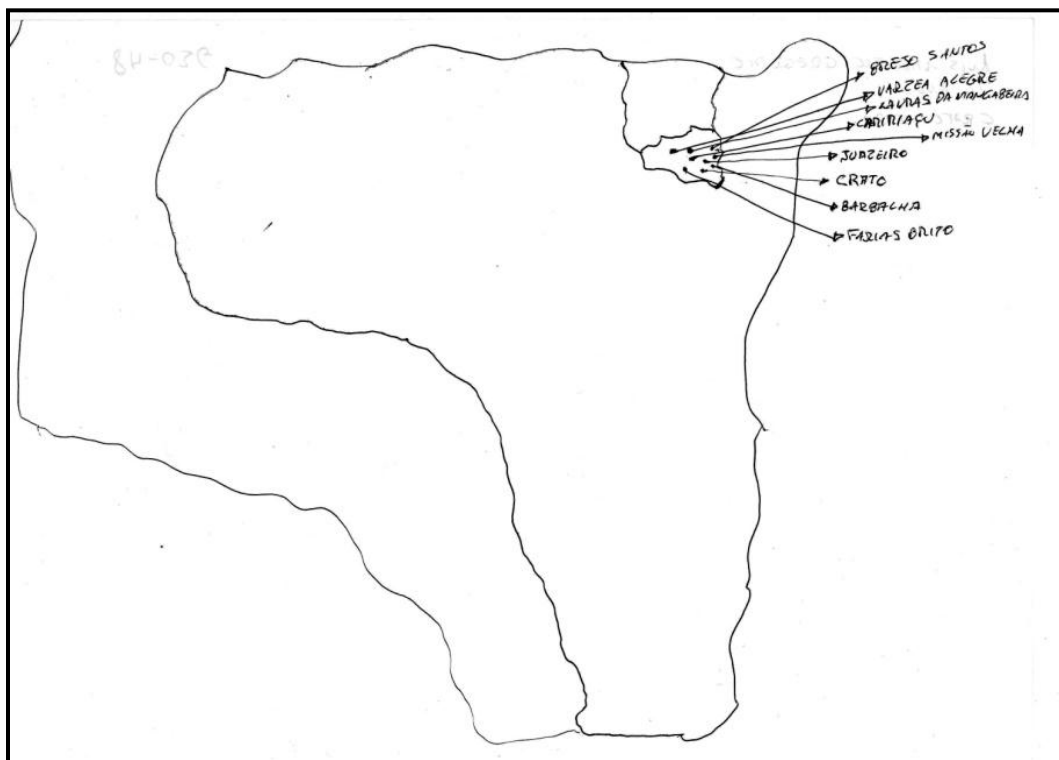


Figure 5.7: The location of the Cariri in Brazil

Other map authors added several place names, either indicated by dots or conventional map symbols (figure 5.8, left). Some students produced detailed maps with more than 30 towns that resemble highway maps without the road network (figure 5.8, middle) or that stress the interconnectedness of the towns in the region (figure 5.8, right).

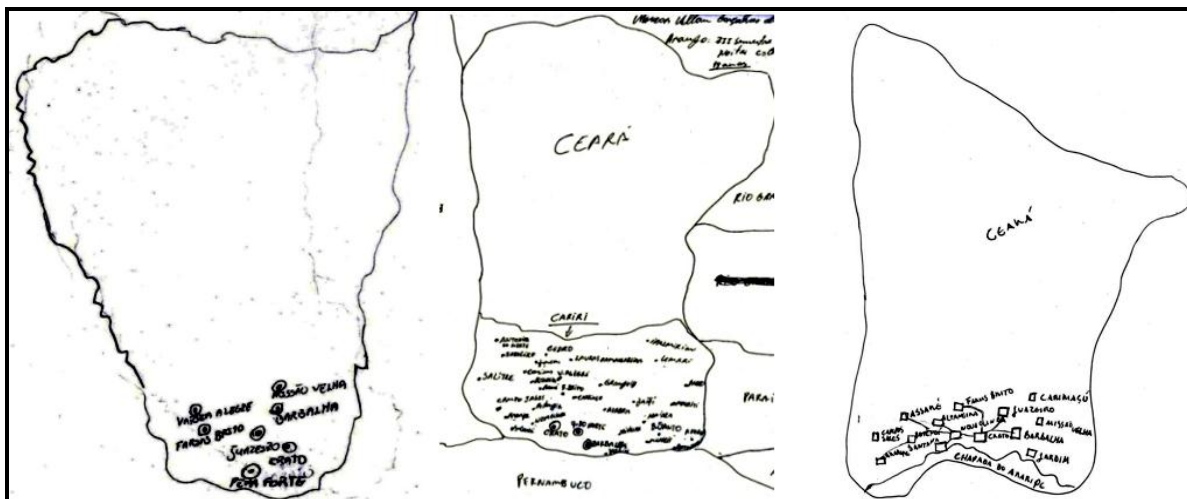


Figure 5.8: Dot and line maps of the Cariri

In general, the region is positioned in the south of the state, probably due to a spatial reasoning that is similar to the placing of South Africa in the extreme south of the African continent.¹²⁶ South Africa can only be in the south of Africa. Figure 5.9, however, shows the towns of the Cariri region occupying the entire shape of the state. The concepts of region and state seem to be mixed up.

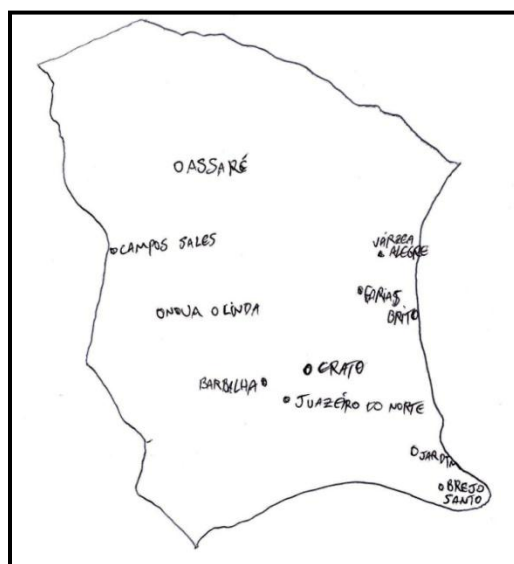


Figure 5.9: The region in the shape of the state of Ceará

¹²⁶ During my research I myself got caught in the spatial reasoning based on cardinal directions and caused a “carto-confusion” with one of my interviewees (see chapter 6). The Cariri region is in the south or “lower part” of Ceará (absolute location), but it is north from the Araripe tablelands and the state of Pernambuco (relative location).

Many mapmakers gave preference to an administrative map type that shows the municipal boundaries of each township. In some cases these divisions were rather emblematic or symbolic aspects in the maps. The mosaic of areal units simulated the real spatial configuration, but did not represent real space.

Figure 5.10 (left), for example, subdivides the southern part of Ceará state in several dozens of irregular and fictitious polygons (only one place name, Crato, is mentioned), while figure 5.10 (right) uses squares and rectangles with a dot inside that symbolically stands for the administrative center of each municipality.

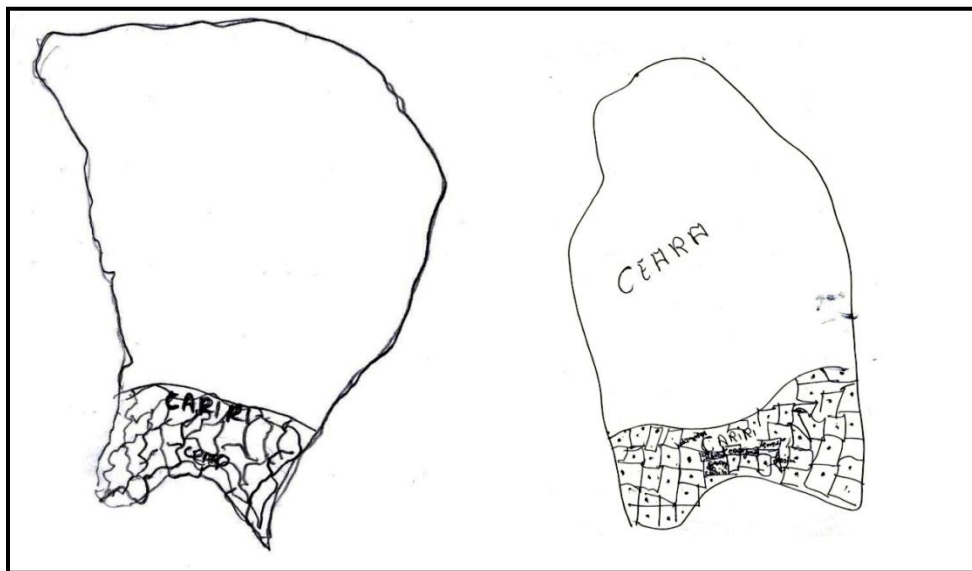


Figure 5.10: Mental maps with polygon elements

Other students made maps that contain more concrete and “trustworthy” details by attributing town names to the polygon areas in the map (figure 5.11, left). In some cases the physical writing space on the map was too limited to add the names so that the student used numbers for the towns that he listed on the bottom of the sheet (figure 5.11, middle). In other cases, the areal extension of the region made up almost one third of the state area (figure 5.11, right).

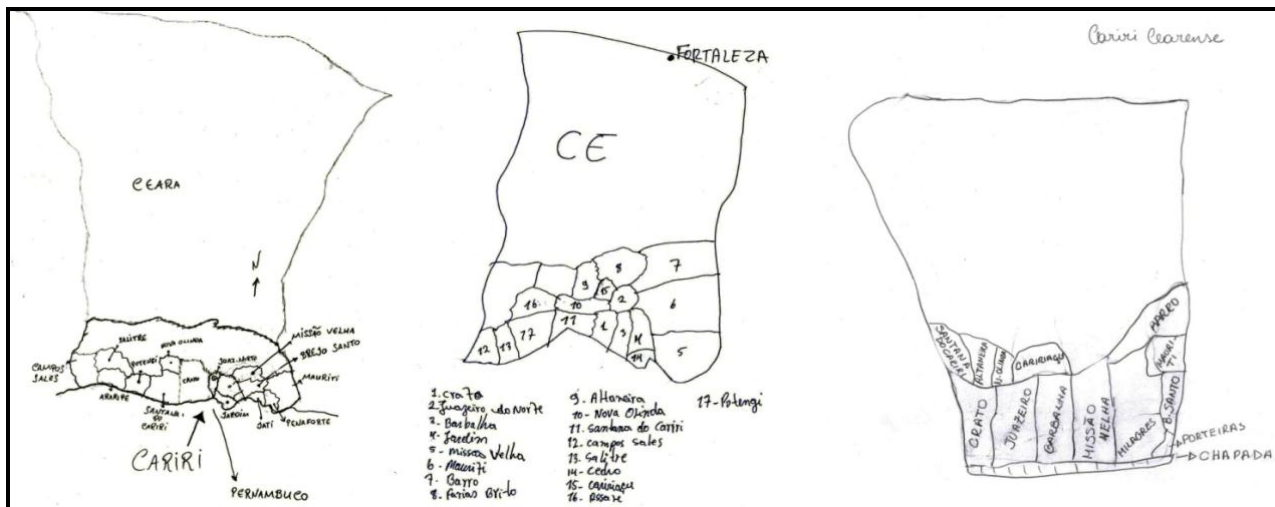


Figure 5.11: Polygons and texts in the mental maps

Only few students used colors besides the lines drawn with black or blue pen or pencil. Figure 5.12 is an exception. The student carefully copied the outline map from a source unknown to me. He retraced the original weak pencil lines with a black pen for the state outline and a blue pen for the main rivers.

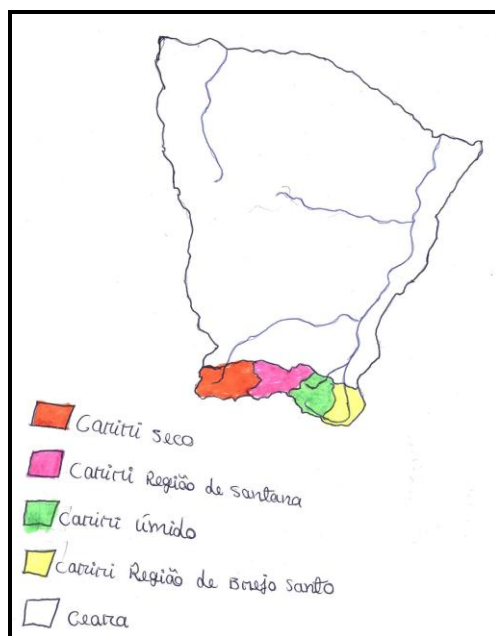


Figure 5.12: Mental map with colors and thematic division

In his map, the south of the state is not divided into administrative units, but classified according to physical geographic characteristics (“dry Cariri”, “humid Cariri”) and regional reference points (“Cariri in the Santana Region”, “Cariri in the Brejo Santo Region”). The map is the student’s own creation, and not a copy of an existing classification.¹²⁷

What draws the attention of the map reader is that some of the mapmakers do not feel comfortable drawing the region in the closest proximity of the state border with Pernambuco. It is known that towns such as Crato and Santana do Cariri have a border with the neighboring state Pernambuco. However, on the maps the region is dislocated away from the state border. The region appears as a mesh of polygons within the state outline and not as tangential to the state of Pernambuco, as if there were a buffer zone between the two states (figure 5.13).

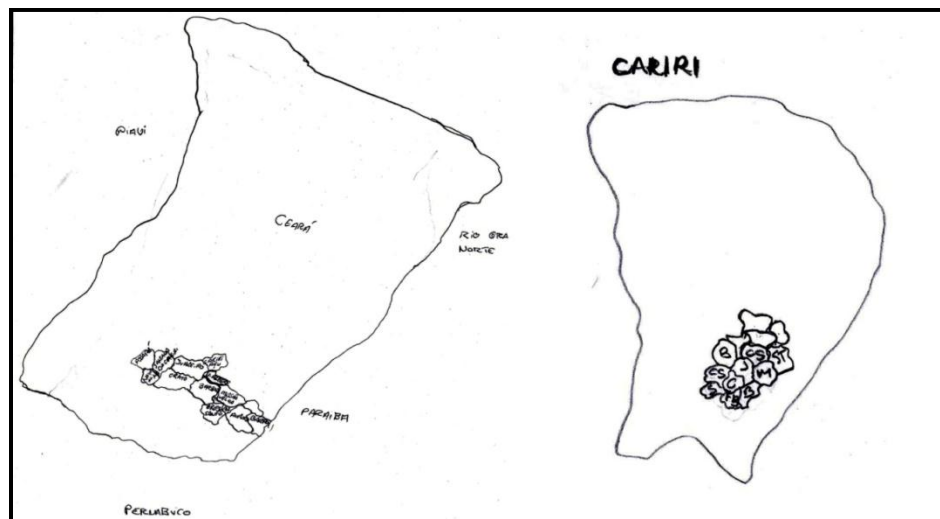


Figure 5.13: The Cariri in the “not so extreme south” of the state

Other students literally tried to fill in the empty spaces of the region by using pictorial elements in their maps that the students considered representative images such as vegetation, land use, and cultural traditions. These maps contain small drawings or vignettes rather than text or place names (figure 5.14).

¹²⁷ At least, I have not found any reference to this regional division in the cartographic and regional literature.

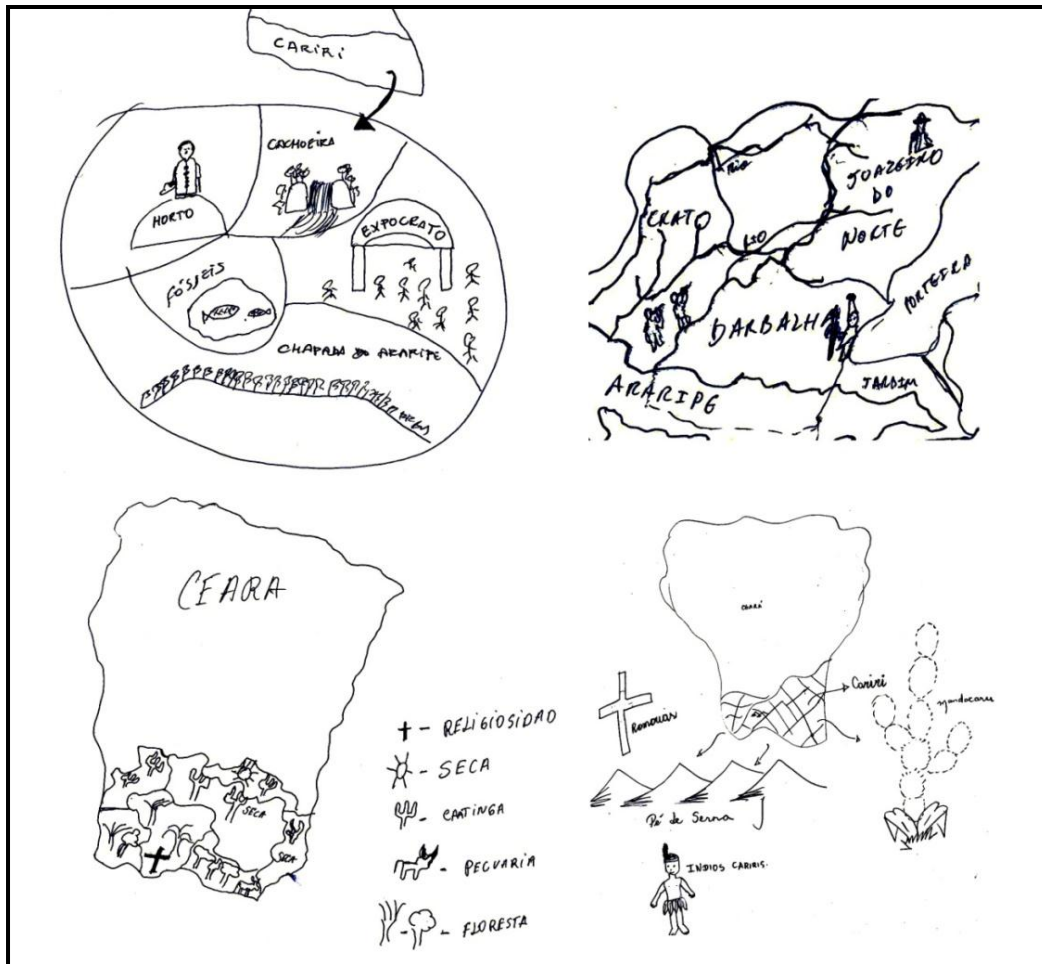


Figure 5.14: Pictorial elements in the mental maps

The maps represent landscape markers such as the shrubland vegetation of Northeast Brazil (*caatinga*), the *mandacaru* cactus and cattle herding, interspersed with tableland panoramas and forest areas. The indigenous people that gave their name to the region are mentioned, while a cross stands as a symbol for the pilgrimage to Juazeiro do Norte. Locals are able to identify the meaning of these small drawings-in-a-drawing, even if these icons are less than half an inch in size as it is the case of the tin-flute band in Crato, the figure of Padre Cícero in Juazeiro and the Mateus figure¹²⁸ in Barbalha (figure 5.14, top right).

¹²⁸ Personality in a regional folkloric dance spectacle.

Regional Mental Maps

Besides these south-of-the-state maps, many students drew mental maps that only showed the Cariri region. These maps, however, did not contain necessarily more details than the smaller-scale drawings. In order to typify these regional maps, I will differentiate them according to the principal vector element used: dots, lines and polygons.

Figure 5.15 is the only map among the 355 maps that does not contain any boundary line to define the Cariri region. The sheet of paper is used as a frame, while the three states Piauí, Pernambuco, and Paraíba, and the state capital Fortaleza serve as cardinal directions indicated by small arrows. The towns of the region “float” within this map space. Each of them is pinpointed by a conventional doughnut symbol. The map author has corrected the position of several place names in less than half an inch (Crato was moved two times).

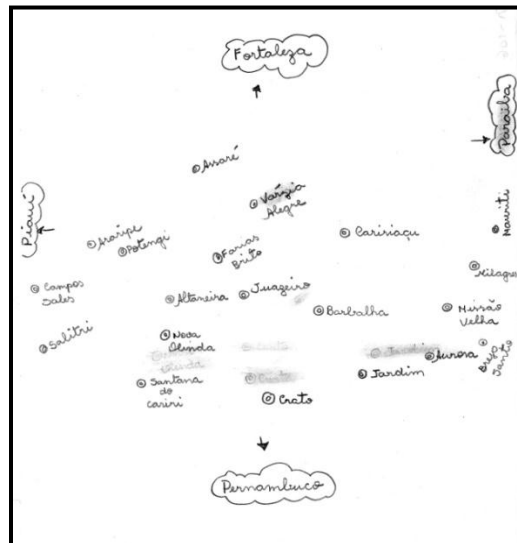


Figure 5.15: A frameless mental map of the Cariri

As in the case of the first map examples (the south-of-the-state maps), the maps that are exclusively centered on the region range from extremely schematic drawings to detailed road maps. The drawings in figure 5.16 are examples of maps that do not show much concern about shapes and positions. Both maps are rectangular map spaces that are used as containers or

“receptacles” for place names. While the first one at least traces an acceptable configuration of four towns and the tablelands to the south, the second map jumbles together four town toponyms and even classifies the state of Pernambuco as a town. The student redundantly represents each place by a symbol that she explains in a legend next to the map, maybe in order to prove that she knows how to employ map symbols, although their use is not necessary.

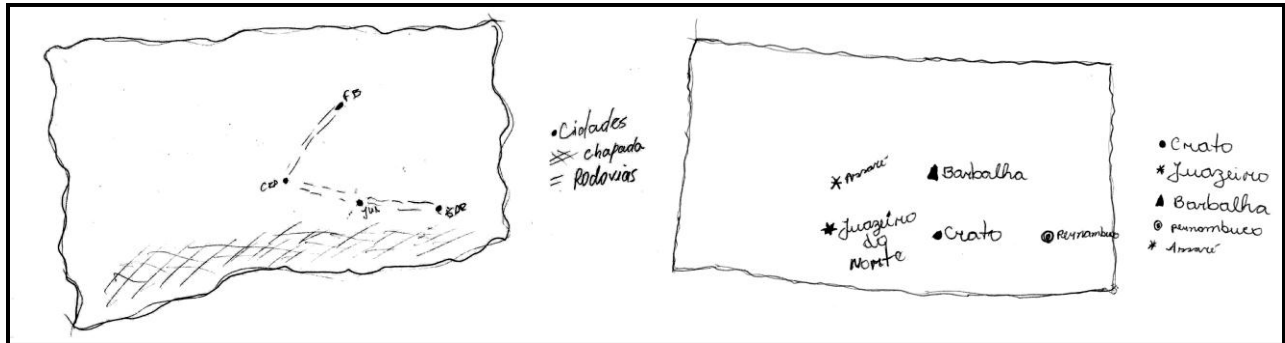


Figure 5.16: “Square” maps of the Cariri

Figure 5.17 is a curious mix of geometric structures, lines and town names. The student may have been influenced by the topics of his cartography lessons since the drawing resembles the index map for the sheets of a topographic series.

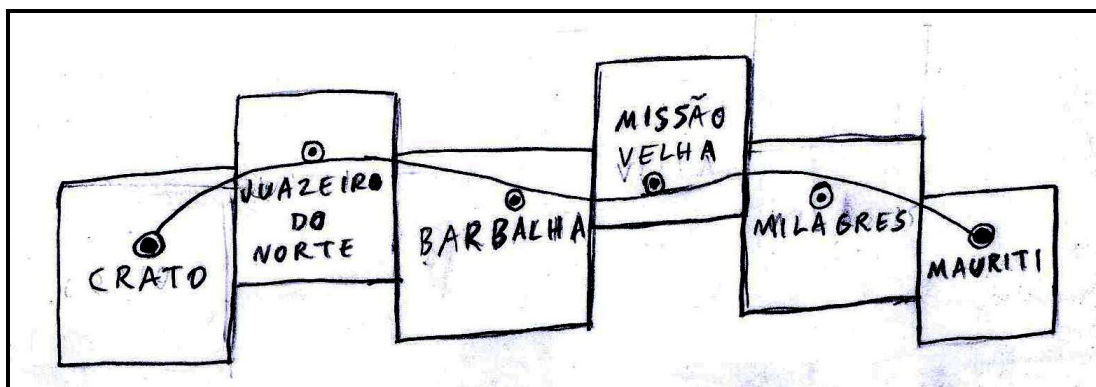


Figure 5.17: A simulated index map sheet of the Cariri

Many other maps reproduce the irregular elongated shape of the southern part of Ceará state that they fill in with place names they know. Figure 5.18 is an example of a thematic map that visualizes “the commerce in some of the towns in the Cariri region.”

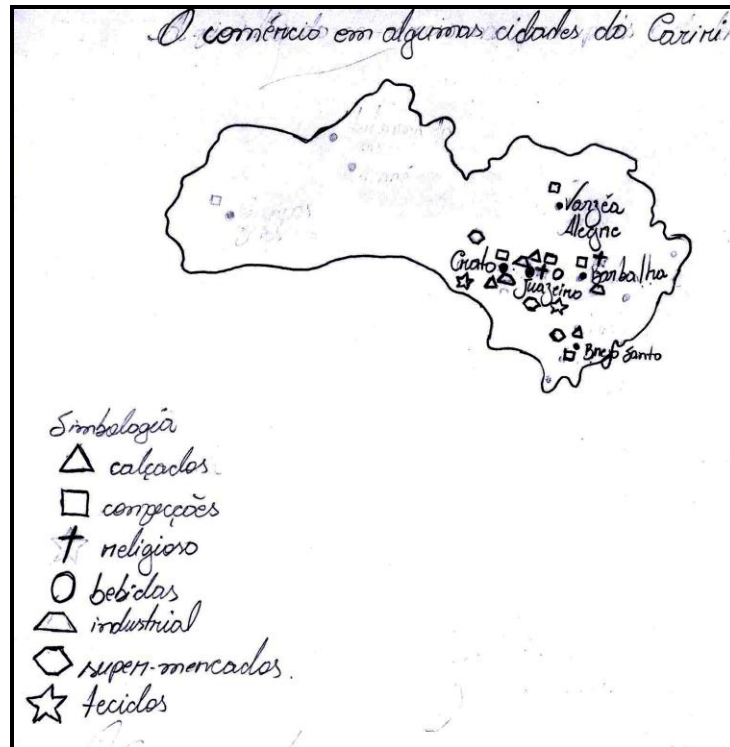


Figure 5.18: A thematic mental map of the Cariri

The map seems to be unfinished since the student has only used the eastern part of the region to add towns and symbols that provide details about commerce and industry (e.g. supermarkets, textile, “confection”, shoes, etc.). Originally there were three town names in the west that had been erased. Underneath the legend is an eight-line text on the regional geography of commerce that the student decided to delete. The text mentions the economic importance of these towns, the quality and accessibility of their products, and their commercial influence on neighboring areas. It is not clear if the student prepared the text for this map exercise, or if she had copied it from a previous assignment.

The maps mentioned above represent towns as separate units without any connection between them. Other mapmakers were eager to point out the linkage between the towns, principally through the road network.

Figure 5.19 (left) puts the towns “on a string” as if they were on a continuous line without bifurcations or branches, not so different from the medieval travel maps that were in fact spatial lists of place names (see for example Delano Smith, 2007). Parting from these dots on the map, the student traced half a dozen of parallel lines, two wavy orthogonal lines and the outline of the regional border. The structure resembles the French long lot system of settlement and the original land division of Brazil in colonial times (*sesmaria* system).

Many of these “string maps” reveal the process of their elaboration. In figure 5.19 (right), the student selected a starting point and imagined the neighboring township. Writing down the next place name, he or she then tried to recall the following town and so on.

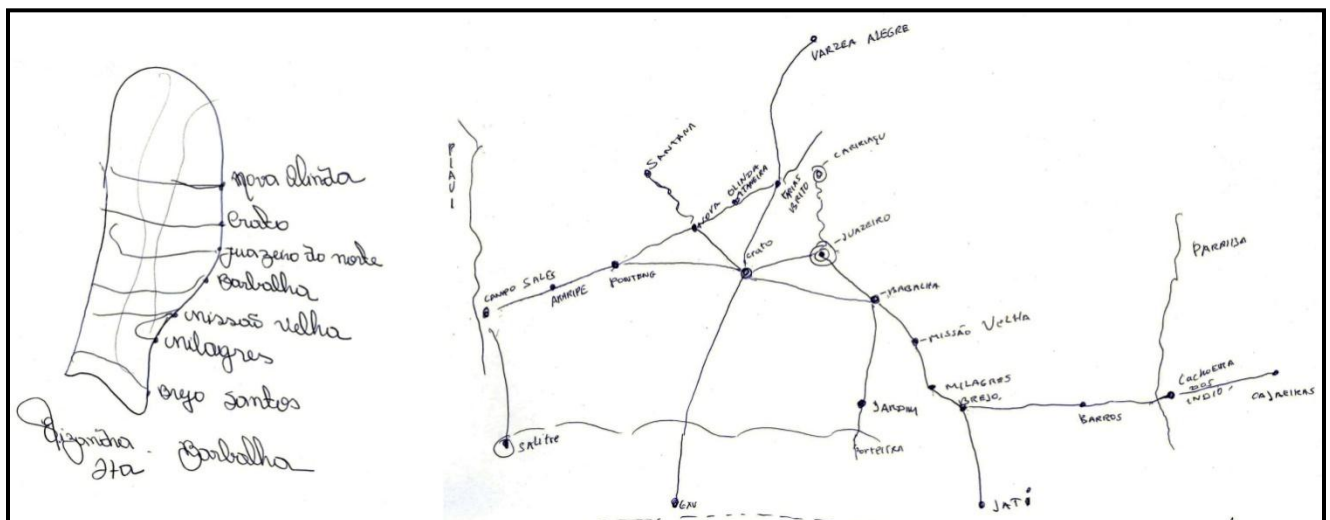


Figure 5.19: Mental maps with line features

Conceiving these maps from this viewpoint, they do not appear as static documents, but as drawings on the move. One can literally “feel” how the author added details one by one. The British anthropologist Tim Ingold suggests a comparison of these line maps to a board game, “in which players compete to move their counters from position to position across a board” (Ingold, 2008, p.96). On both surfaces, on the board and on the map,

locations or positions may be joined by lines to indicate possible moves Together they form a network in which every place figures as a hub, from which connections fan out like the spokes of a wheel (Ingold, 2008, p.98).

The author of figure 5.20 (left) emphasized this map-as-game-board impression by adding the word *início* (start) on his map. The starting point of this “cartographic game” was the town of Crato. While this figure contains a network structure rather than a “towns on a string” configuration, other maps employ Ingold’s spokes-of-a-wheel strategy. The author of figure 5.20 (left), for example, selected one town (Barbalha) as central point from which the spars to other places spread out.

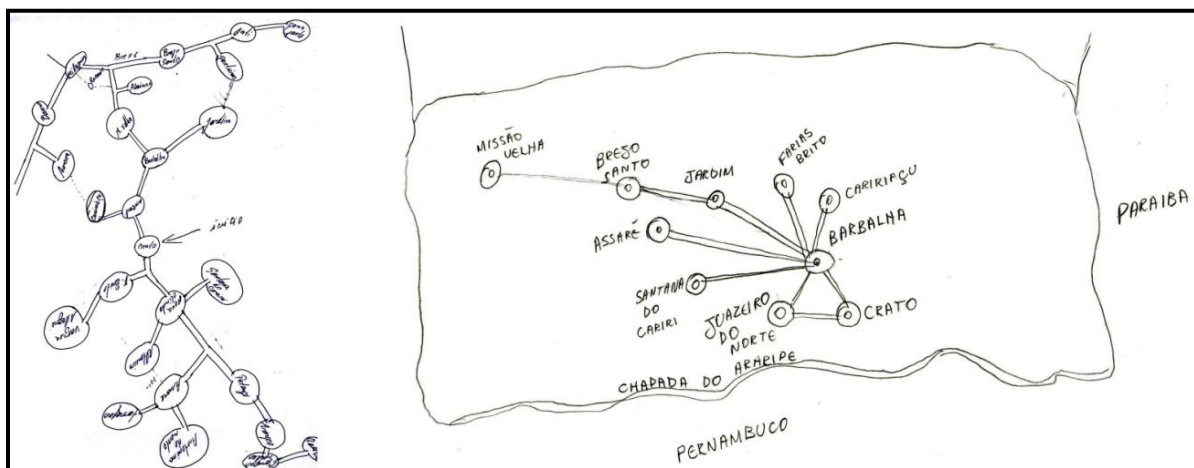


Figure 5.20: Mental maps as a game board and with a radial structure

This type of map is like the simulation of a bus ride. Many students undertake a daily bus ride from towns an hour or two away in order to get to the campus. It is not a surprise that some of the students even added the denomination of some of the main highways (BR-116, BR-230, CE-55, not all correct).

Yet other maps contain mainly area elements that simulate choropleth maps that are commonly used for thematic cartography. The main element of this map type is its polygon structure. The emphasis is on area features that many students used in order to fabricate their maps, sometimes as if they were “gluing together” spatial units (towns, municipalities).

Different from the first category of the south-of-the-state maps, these maps represent only the Cariri region and its immediate proximities. In many cases the region appears as an area with outlines or boundaries that is floating in an empty space. There are rarely any references to regions and places beyond the limits as if the Cariri were an island surrounded by blank spaces.

Ethnographies of Mapping and Mapmaking

As we have already seen above (figure 5.10), the administrative division of the municipalities is frequently fictitious and purely symbolic and emblematic. The polygons do not represent real areas, but simulate their existence. These maps can be sketchy drawings with hastily penciled lines or ragged jigsaw puzzles without any place names. There may be a “cartographic anxiety”¹²⁹ or a fear of inaccuracy that builds a psychological barrier and prevents students from adding concrete details that refer to the “real” space. Some students only filled in their home town or the places in their proximity and left the other polygons in blank or with a question mark. In these drawings the students stopped adding details when they realized that they were stepping into *terrae incognitae* or, literally, a sea of question marks (figure 5.21, left). The home town represents the map center around which the neighboring towns circle, not unlike medieval town maps (figure 5.21, right).

Other mapmakers, however, combined their spatial knowledge with the as-if mapping: One student wrote town names over the polygon structure without caring about boundaries. The toponyms occupied more than one spatial unit. The names were written according to the towns

¹²⁹ This is a deliberate allusion to Derek Gregory’s (1994) ideas of “cartographic anxiety”. Whereas Gregory restricts himself to how maps can create a sensation of insecurity and awe in their readers, my emphasis is on the individual mapmakers and how the Cartesian discourse and the “ethics of accuracy” in cartography (Harley, 1989a, p.5) can stall or block mapmaking skills and abilities.

that the student was able to remember during the exercise – not necessarily related to their real location.



Figure 5.21: Uncertainties and circular worldviews in the mental maps

For example, the town of Jati (extreme south of Ceará state) figures on the top of the map next to Campos Sales that is located in the farthest west (figure 5.22, left). Some students used the polygons as pigeon-holes. First they drew the structure and then they included a town name in one of the open spaces when they remembered it.

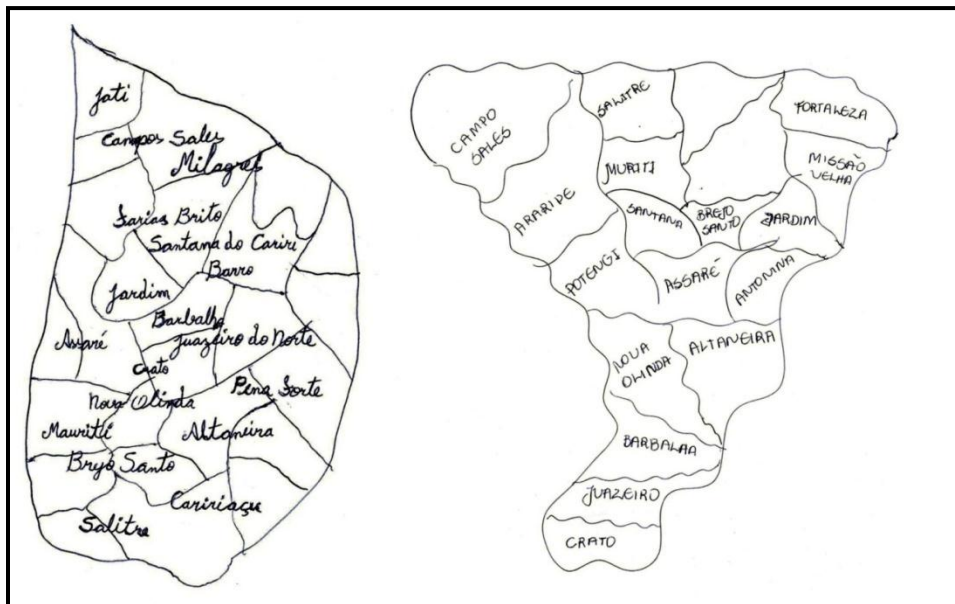


Figure 5.22: Text writing and polygon-adding in the mental maps

Figure 5.22 (right), for example, shows the student's mapping strategy. She used the town of Crato as initial point and started to add other municipalities in an unorganized order. The state capital Fortaleza surprisingly popped up next to the town of Missão Velha, about 350 miles away!

The size of the paper sheet can be the limit for this polygon-adding strategy. The author of figure 5.23 (top) probably started with his hometown Nova Olinda, an inch away from the center of the paper, and then added towns to the west and to the east, until he realized that there were far more places east of Nova Olinda.

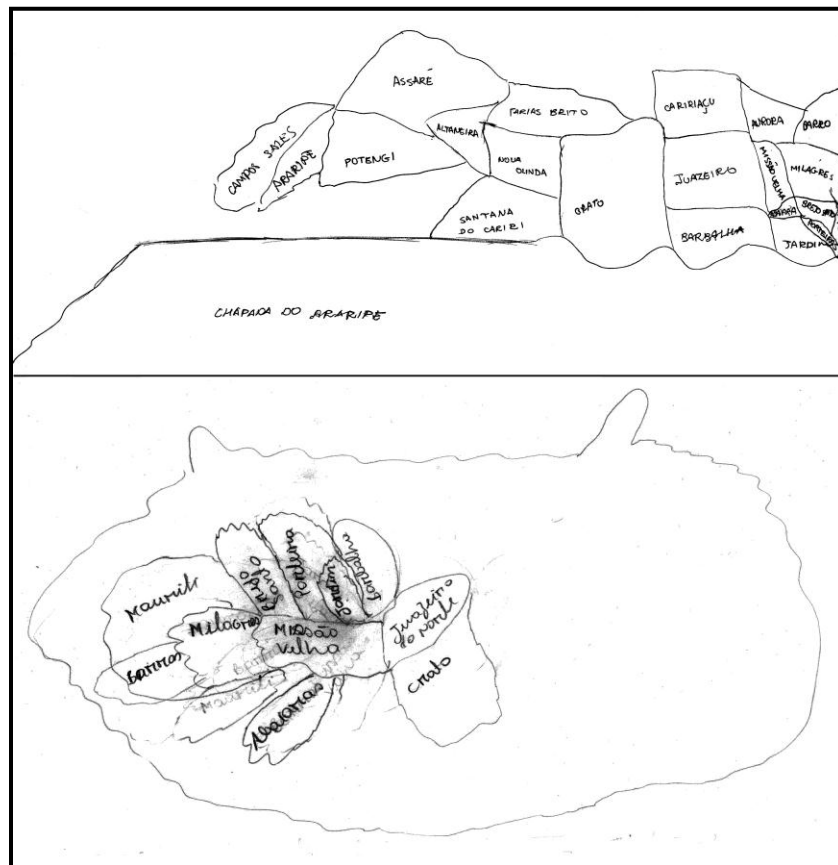


Figure 5.23: Drawing strategies and the use of space on the paper sheet

As a result of this, the polygons on the right-hand margin of the sheet had to be squeezed in order to be included on the map. On the other hand, this mapping technique can lead to results

such as figure 5.23 (bottom). Towns are added in a bubble format but they do not occupy the whole space of the regional outline, even when they are located at the state border.

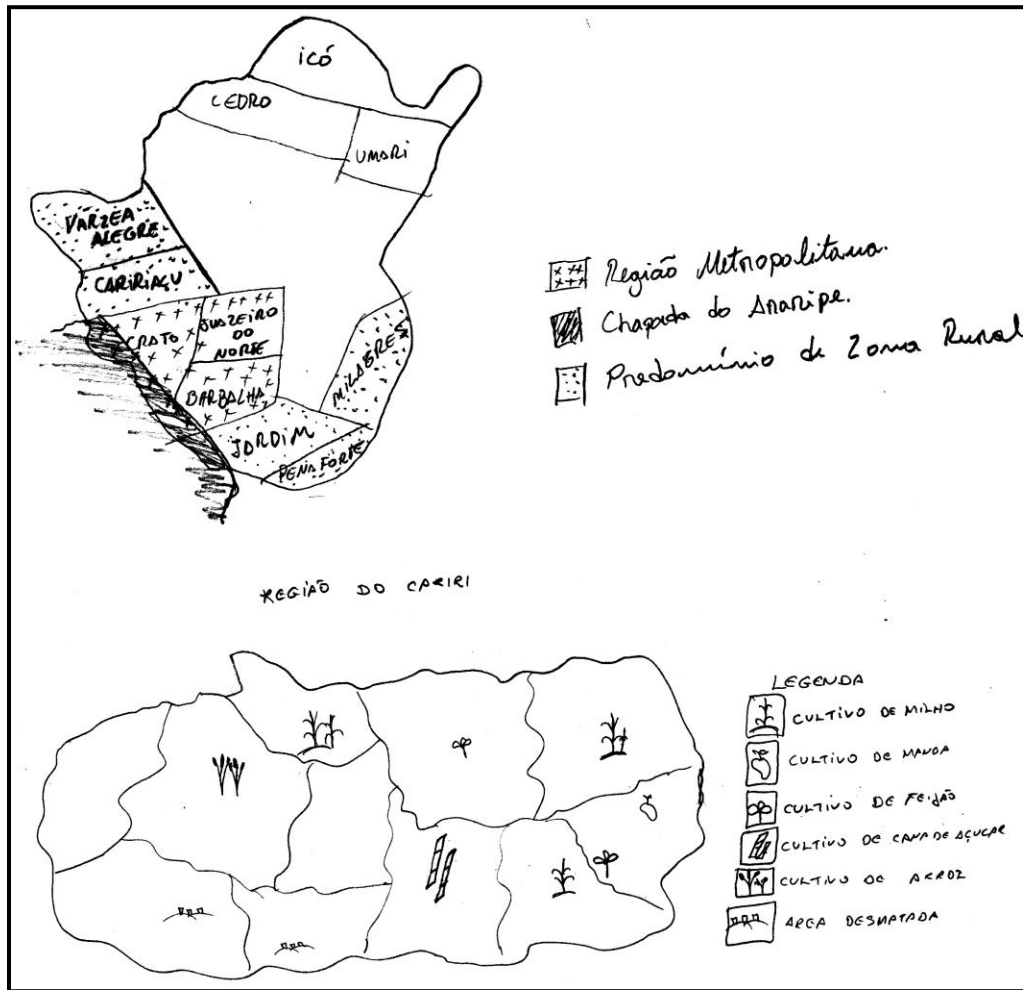


Figure 5.24: Examples of thematic mental maps

Despite the frequent use of the polygon structure, few mapmakers made use of it for a choropleth map. The drawings in figure 5.24 are examples of two timid attempts to represent more than just the location of municipalities. While the map on the top classified the towns according to two main categories (metropolitan region and predominance of the rural zone) with a strange gap between the region and three other unclassified towns further to the north, the author of the second drawing declined from mentioning any place names and used symbols for each town to represent their main agricultural activities. The towns remained anonymous but still

could be identified through the land use (corn, manioc (misspelled *manda*), beans, sugarcane, rice, and “deforested area”).

The regional maps were frequently reduced to the economic, cultural and political “heart” of the Cariri, the towns of Crato, Juazeiro and Barbalha, with a population of over 400,000. Taking seriously the expression *CRAJUBAR triangle*, some of the students interconnected the three towns, either in the form of polygons or literally as a triangle (figure 5.25). In this map, the student added symbols (\$ stands for commerce, an open book for education, a cross for health care, and a group of three church buildings as religion) and a short text in which she stated that “Crato, Juazeiro and Barbalha form the CRAJUBAR triangle, three municipalities where the economic, religious and cultural dynamics happen.”

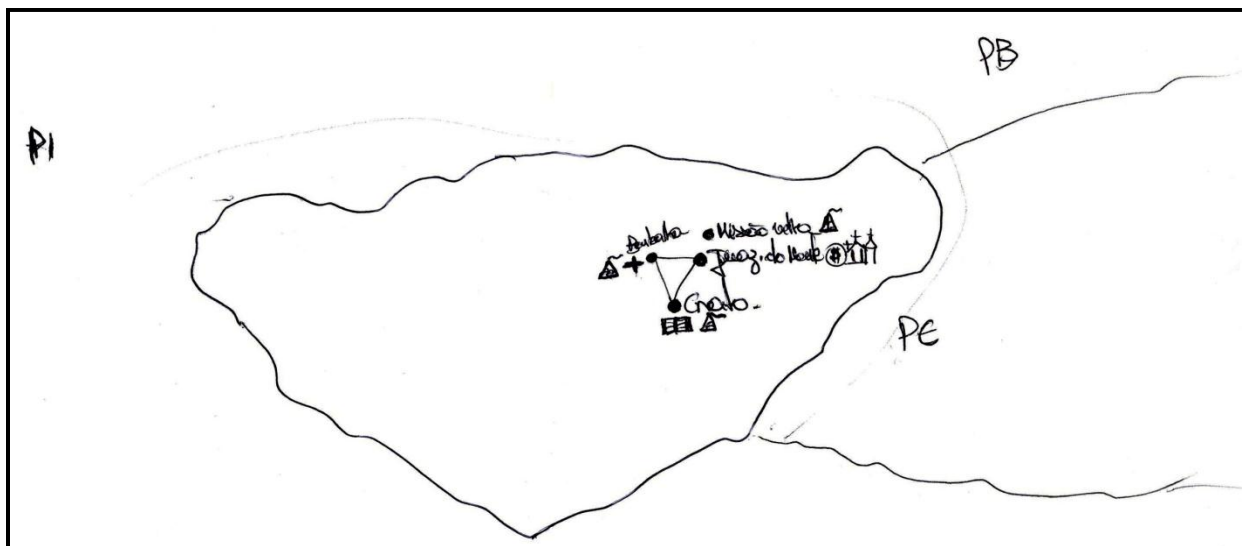


Figure 5.25: The centrality of the CRAJUBAR in the mental maps

Mental Maps as Visual Communication

The media has created strong stereotypes of the region that attribute one or more particular images to each town. Juazeiro do Norte frequently stands for economic power and religious manifestations, while Crato is the home town of a traditional agricultural exposition

(*ExpoCrato*) and the pioneer in higher education in the south of the state, and Barbalha the hotspot for health care (regional hospital) and cultural festivals.

Other maps stressed regional images. The pictorial elements can even eclipse the cartographic content. The emphasis on graphical components may be the result of a cartographic insecurity that some of the students felt when they drew their maps, or a manifestation of the students' creativity and power of expression.¹³⁰ Some of the drawings did not hide their sketchy and almost childlike appearance (figure 5.26), e.g. a helmeted manakin (*Antilophia galeata*), an iconic bird that has turned into a symbol for the threatened regional fauna, pilgrims to Juazeiro in a flatbed pick-up truck (*pau-de-arara*, literally parrot's perch) – the human bodies are not more than the five-lines-and-a-circle solution - or non-perspective house façades, contrary to the cartographic view from the top.

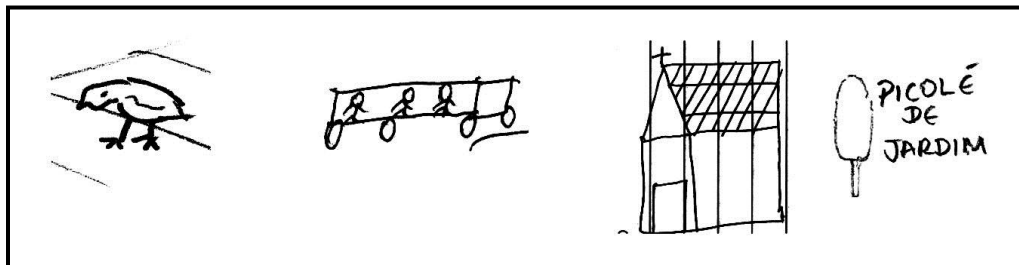


Figure 5.26: Drawings within the drawings

Other maps can be read rather as graphic novels of the region that praise the peculiarities that only exist in the Cariri region, from sugarcane mills, popular festivals, Cretacean fossils, and spectacular observation points to bathing places and the popsicle from the town of Jardim (figure 5.26, extreme right). The author of figure 5.27 adds a legend with seven items, including highways, the National Forest Park, rural labor, factories, deforestation, children studying, and

¹³⁰ This “graphicacy” is directly linked to the present-day situation in Brazilian education. I have been an observing participant in undergraduate courses since 1998 and have noticed that “underachieving” students (according to the official discourse, those who fail in Portuguese and math) frequently show extraordinary drawing skills that are not taken into account by the educational system.

violence and drugs. The label “Cariri: physical and social” replaced another title that is still readable under a thin layer of correction fluid: “Cariri: political, economic, environmental division.”

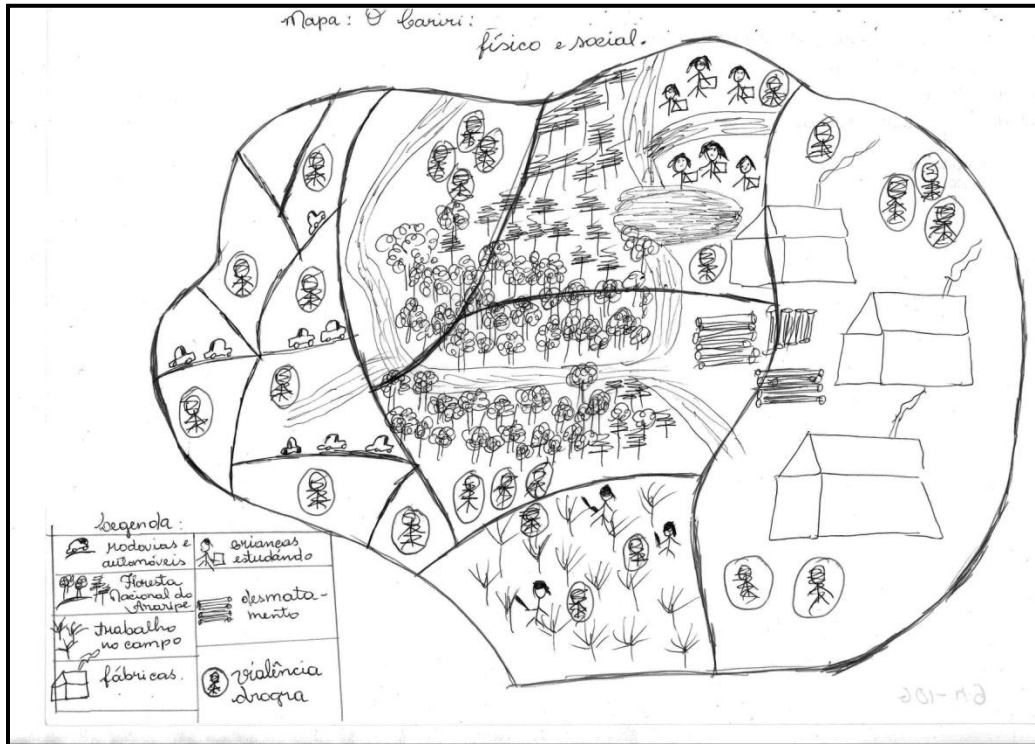


Figure 5.27: A complex picture map of the Cariri

The elaboration of the map symbols is sketchy and looks like a child’s drawing. The author indicates the human presence and agency by using stick figures. Some of them are rural workers (with a cloth on their heads as protection) cutting plants with machetes, others are crisscrossed symbols in a round traffic sign to indicate that violence and drugs literally cross out lives.

In one case (figure 5.28) the student created a “highway perspective” by drawing the landscape that the travelers can expect to find on the top of the tablelands: highways that seem to have been made by the use of a ruler and forested areas without any sign of human agency.

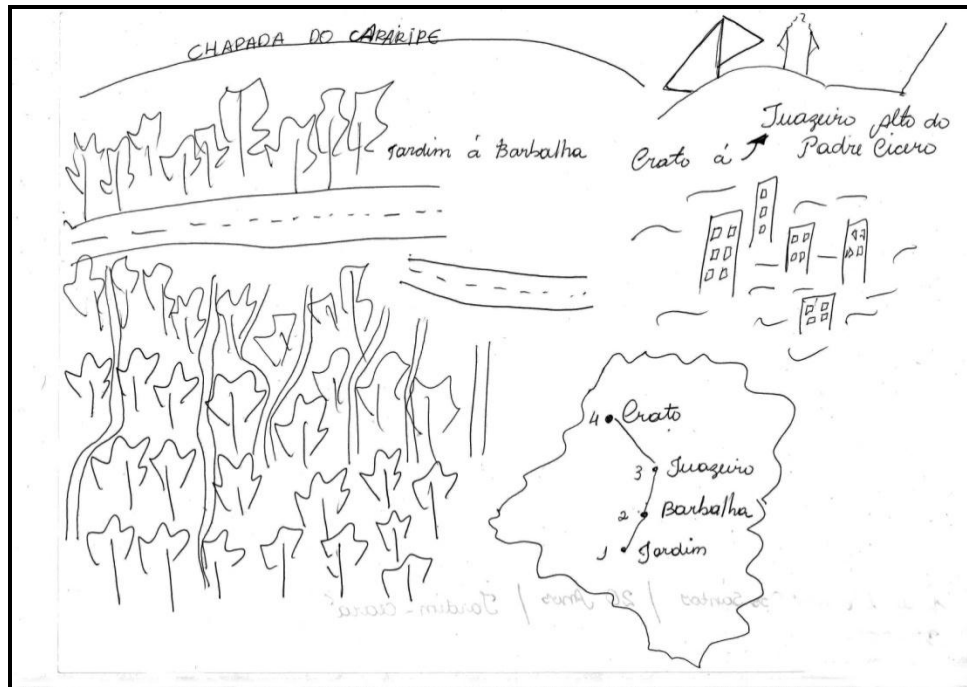


Figure 5.28: Ground perspective in mental maps

The maps also provide details about the students' border (un)awareness. Many maps simply ignore the fact that the southern part of Ceará state shares a border with three other states: Piauí in the west, Pernambuco in the south, and Paraíba in the east. However, the regional maps appear as a cut-out form that is floating in empty space without the existence of neighboring places rather than as part of a spatial continuum. Figure 5.29a is an example of a regional map that rendered the state border invisible. The towns of Exu and Moreilândia are part of the Cariri within its regional outline. The author of map figure 5.29b discreetly traced the border between the two states and draws the outlines of the town areas in Pernambuco in dashed lines. The Araripe tablelands occasionally appeared as a barrier between the two states (figure 5.29c). Figure 5.29d even emphasized this separation through a sophisticated hachure that is normally used for Precambrian crystalline rock formations. Figure 5.29e visualized the characteristics of a tableland landscape: a ragged and continuous band to symbolize the abrupt rise and a blank space that represents the flatness on the top.

A longer text described general facts of the region and mentioned its peculiarity as an industrial pole. The author mentions the highlights of the pole: derivatives of sugarcane, cotton agro-industries (the word *algodoeiras* is misspelled as *agrodoeiras*), and derivative leather products. The following lines “classify” the Cariri region as “special region, both in a cultural and an industrial and religious sense,” and provide a list of the “principal towns” and the total area “of approximately 6,342 km².” However, the student did not show any concern about the simplicity of his drawing that he still considers as an image representation: “Obs[ervation]→ I only made a representation (image) of the industrial region of the Cariri.”

“Maptitudes” and “Cartotalks”

Maps are processes rather than products and need to be understood within the frame of their production. In the case of my map exercise in the classroom, the map drawing was not done under exam conditions. Students had the choice to draw their maps or not. However, it is understandable that a blank sheet of paper could turn into a psychological barrier or provoke extreme “maptitudes.” Several students did not draw a map and left the paper untouched for different reasons. Some of them felt embarrassed or insecure, while others openly manifested their lack of interest flipping through mail order catalogues during the activity in class. Yet other students did not want to turn in an empty sheet of paper (taking into account that they are majors in geography), but did not know how to trace the lines. For them the solution was to create “cheat charts” by openly copying the map contents from their neighbor who had a more solid knowledge of regional cartography (figure 5.31).

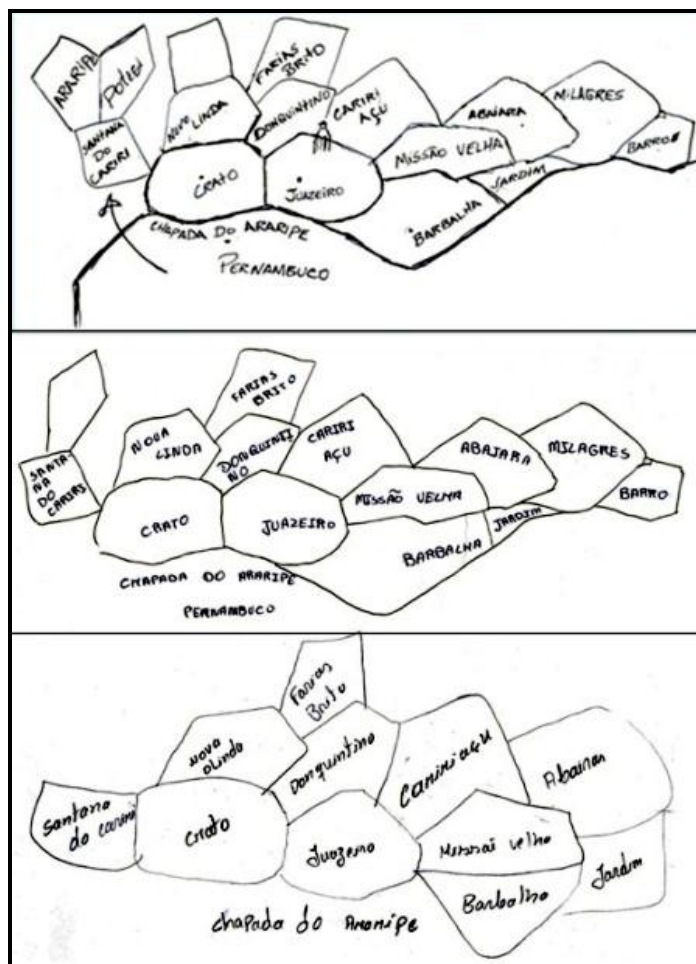


Figure 5.31: “Cheat charts” of the Cariri

The mental map on the top is the most complete of a set of three regional maps, while the authors of the two other maps below seemed to have reproduced most of the details from the first map in their own drawings. The second map even copies the strange gap between Crato, Nova Olinda and Santana do Cariri, while the drawing on the bottom “abbreviated” the contents by leaving out several towns in the east and the north.

For some students the mental map exercise served to communicate with me or to send a message, either personal or as a social critique. Figure 5.32 is a curious map for more than one reason. The student used a green crayon to draw an elongated irregular shape with interconnected dots, but without any place names and wrote the title *Imaginary Cariri* on the

right side of the drawing. On the back of the sheet a sentence in quotation marks was added: “He knew that when someone is jailed, the first thing he does is elaborate a mental map of the place.” It is unclear if the sentence is a quote or only a self-reference by the student. Knowing that I am German, he put down a question in the upper left corner of the reverse: “Are you in favor of the Nazi doctrine?”¹³¹

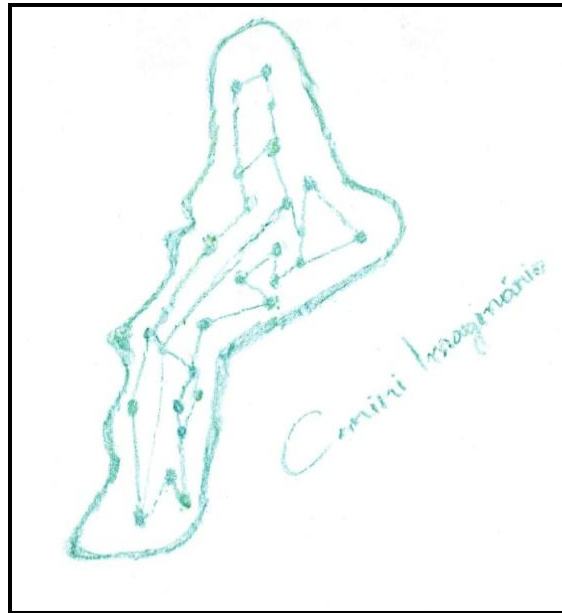


Figure 5.32: An “imaginary Cariri”

Some students used their maps as vehicles of social critique. For example, one student replaced the toponyms with the names of local festivals (rodeos, music, religious celebrations). In a short text at the bottom, she criticized the serious situation in the region: “Recently the Cariri has been reduced to festivals. Education, health, welfare and all social support are in crisis”.

One student showed an extreme enthusiasm for the map exercise. Antônia did not content herself with the map she produced in class, but produced another map with more than 40 place

¹³¹ This inquiry would have been deemed offensive for many Germans, but within the context of my long-term teaching experience in Northeast Brazil, the question simply expressed a natural curiosity about foreign places. I have been confronted quite frequently with inquiries about German history. Due to the lack of opportunity to travel to Germany and the caricaturing effects of media coverage, the students received a distorted image of Germany and are not aware about the geopolitical consequences. One day when I was doing the map exercise with one of the undergraduate groups in the morning, a late-comer entered the classroom and shouted “Heil, Hitler!”

names (not necessarily more accurate) and the main highways that she handed in to the secretary in the department office. She literally engaged herself in the representation of the region and projected her new map on the back of a pricelist from a shop in downtown Crato where she worked as a mattress seller during the day (figure 5.33).

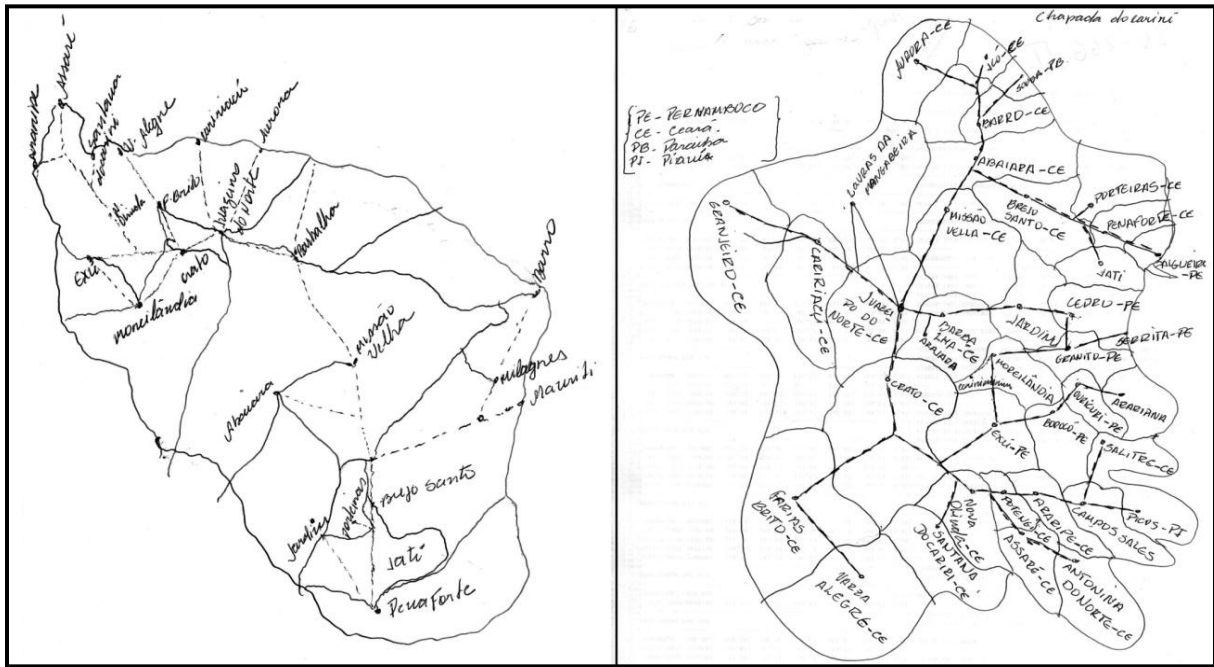


Figure 5.33: Antônia's mapping enthusiasm

The conversations I recorded during the map-drawing provided further insights into how the students produced their maps (figure 5.34).¹³² The recordings were not dialogues or focus group interviews, but rather an attempt to capture voices and short remarks.¹³³ Common reactions included the initial rejection of the exercise and an undisguised cluelessness. Some of the students desperately searched for a map that they could copy. The drawing task was rather considered an act of reproduction than an act of creative production.

¹³² The “cartotalks” were recorded in six sessions of between nine and 16 minutes of duration (total recording time about one hour and 20 minutes). Simultaneous talking and the high noise level had an impact on the quality of the material and rendered the transcription difficult or almost impossible.

¹³³ For a more structured analysis of discourse during map exercises, see Wiegand (2002) who recorded and analyzed conversations between students during a session on the reading of digital thematic maps.



Figure 5.34: Mental map exercise in classroom (photo by author)

During the map exercise, there was a constant coming and going and an increased noise level. Latecomers asked for pens or sheets of paper (although I supplied paper for all students) or even asked (after 5 or 10 minutes of idle reflection) – what they were supposed to do:

- A: Hey, make a map of the Cariri.
B: No, I don't know. Have you got a sample?
A: What?
B: A sample.
A: No nothing. Go and imagine it.¹³⁴

Mapmaking does not have to be serious. A student jokingly asked for a red pen that he would use to indicate the fires in the region:

- A: Can I borrow that red pen over there. My map will be in red. There are many fires going on.
B: That was even a good one [joke].¹³⁵

Other students felt like rats in a laboratory:

- A: I am a guinea-pig now.
B: I feel discouraged.
A: My pencil needs to be sharpened.
B: The Cariri is more or less... The Cariri is more or less an egg.
A: Are you serious?¹³⁶

¹³⁴Recorded on June 15, 2009, 8th semester, nocturnal.

¹³⁵Recorded on June 15, 2009, 8th semester, nocturnal.

Figure 5.35 is a detailed road map of the Cariri. During the exercise, the student drew the lines and explained the contents (including the mileage between some of the towns) to me at the same time:

There it goes to Brejo Santo, then to Porteiras that I have not included, yet. From there it goes back through the inside to Jardim. A dirt road, but it is paved. Jati and Penaforte. Jati is already at the border to Pernambuco. And here I go back to the Cariri.¹³⁷

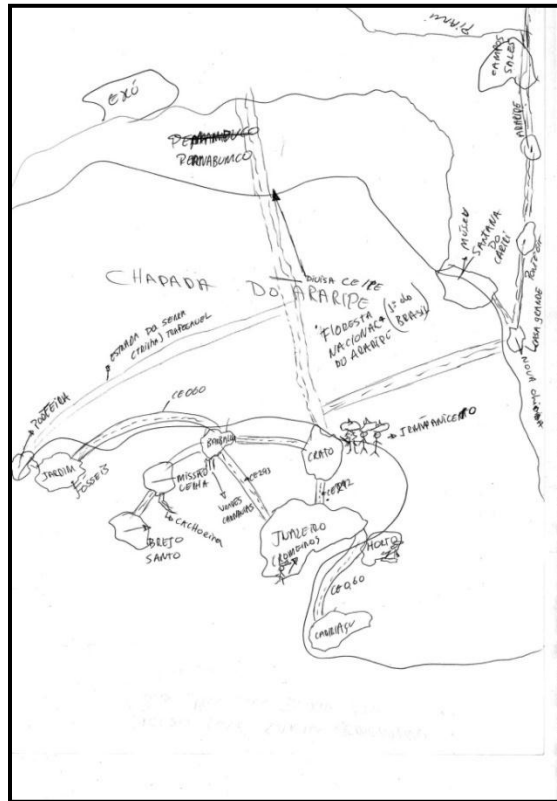


Figure 5.35: Mental map of a Coca Cola delivery truck driver

When asked him about his geographic experience, the student told me that he had worked as a delivery truck driver for Coca Cola. His knowledge of the western part of the Cariri (top right in the map) is less detailed and he had to consult one of his friends in order to know if the town of Salitre should be included in the region or not:

¹³⁶Recorded on June 15, 2009, 8th semester, nocturnal.

¹³⁷Recorded on June 15, 2009, 8th semester, nocturnal.

A: Hey Edilson, Salitre is Cariri?

B: Yeah.

A: It is. Yes, to be true, Salitre is to be like this: Campos Sales, the highway goes this way, and Salitre is near Potengi, here from the inside (...). This is my idea of the Cariri.

C: We know the places when we go there.¹³⁸

Interviewing a Mental Mapmaker

During the map exercise, I had a short conversation with one of the students that had already drawn a mental map for me in the previous year. Cícero is in his mid-20s. His goatee makes him look older than he is. He studied at the Agricultural College in Crato, travelled around in the Northeast of Brazil for some time to sell jewelry and then decided to take up studies in geography at the Universidade Regional do Cariri. He was one of the students who took part in my 2008 map experiment.¹³⁹ Cícero's map from 2008 (figure 5.36) was a simplified road map of the region, labeled as *Kariri – Land of the Dinosaurs, The World without borders*, showing the main towns and districts in the Cariri that he connected by lines.

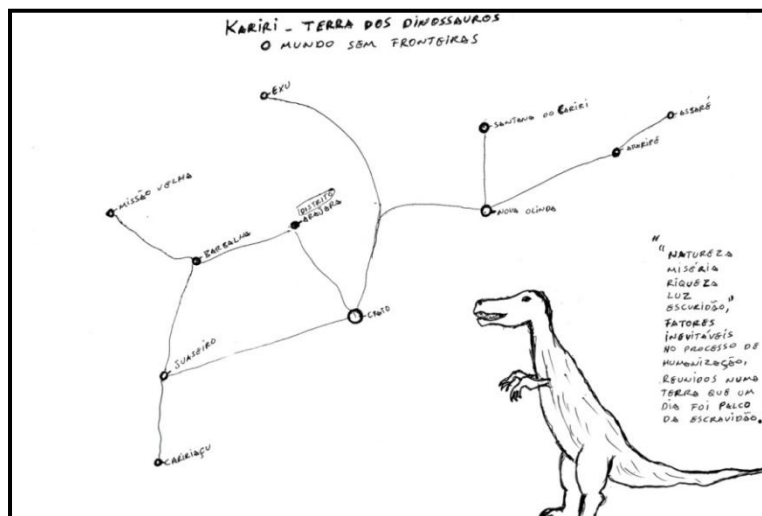


Figure 5.36: Mental map of the *Kariri – Land of the Dinosaurs*

¹³⁸Recorded on June 15, 2009, 8th semester, nocturnal.

¹³⁹ In the previous year, I collected 51 mental maps from 3 different classrooms, but due to time limitations and the death of the former dean (which led to a three-day-period of official mourning) I was not able to continue my data collection.

On the lower right-hand side, Cícero wrote a small text in shaky capital letters: “Nature, misery, richness, light, darkness, inevitable factors in the process of humanization, reunited in a land that once was the arena of slavery.” The text is inserted in the back and the tail of a dinosaur (a T-Rex?) which is the most visible element in the map.

During my 2009 fieldwork I met Cícero again, and this time we agreed on executing a more detailed project. Instead of a brief map exercise in the classroom I asked him to write his own comic story version of the Cariri region that I would discuss with him later on. Cícero produced a three-page account of the *New Era of the Cariri: The Era of Petroleum* (figure 5.37) in which he described the history and development of the region from the perspective of its first native habitants, the dinosaurs.

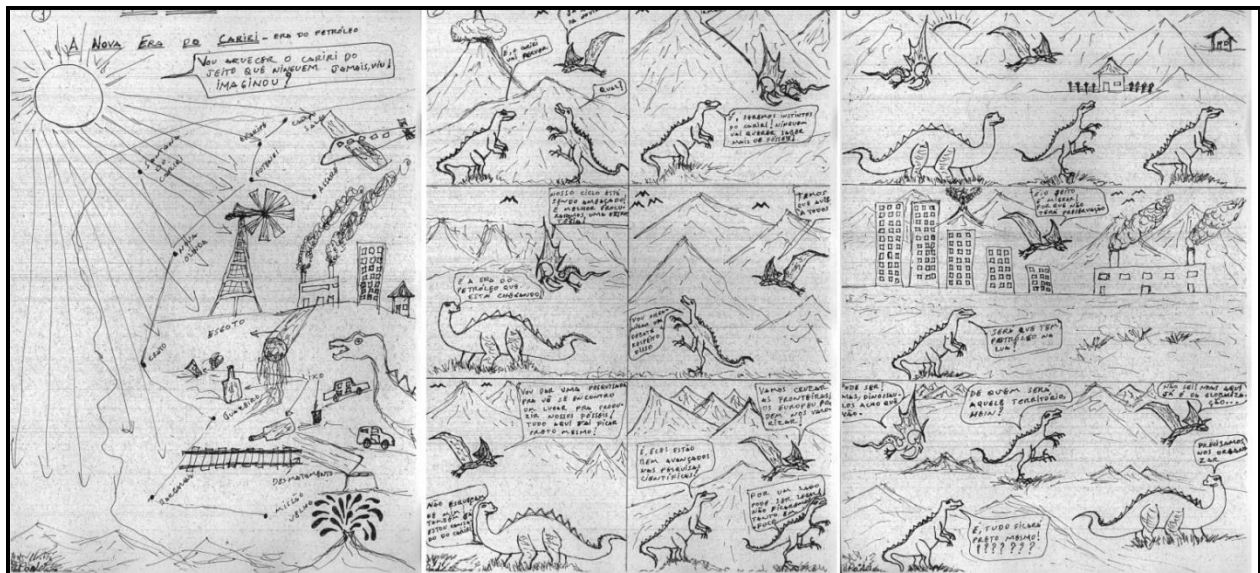


Figure 5.37: Cícero’s map story of the Cariri

On the first page a scenario of oil rigs, factories, high-rise buildings and aspects of environmental pollution (sewers, trash, and deforestation) are framed in a hill landscape under a shining sun and projected over a map of the region that contains the names of ten towns indicated by dots that are interconnected through lines. The two following pages relate the conversation between several dinosaur species about the impacts of petroleum prospection on the

fossil heritage in the region. The dinosaurs express their concern with their possible extinction due to the globalization processes linked to the oil industry.

Intrigued by his drawing I asked Cícero about the meaning of the dinosaurs, taking into account that they commonly stand for backwardness and the archaic. However, for him the dinosaurs and the Mesozoic fossils in the region represent a positive factor because

it caused an acceleration in the process, the civilizational process in the region, this issue on dinosaurs, the study of fossilization, the study of fossils, and this accompanies a set of things, with everything, from the question of fossil smuggling to the scientific knowledge itself.¹⁴⁰

Cícero chose this form for his drawing in order to add unconventional elements to his map that represent local aspects in a “more expressive and satisfactory way”. His critique is against the chaotic development of the region in the face of globalization and capitalism that deprives “natives” such as the dinosaurs of their natural environment and forces them to emigrate.

He also manifested his critical attitude in his landscapes of the Cariri. Instead of the common image of a plateau with its steep rise that resembles a rock wall at the horizon, Cícero drew sharp-edged and ragged volcano-like structures. He purposely created these counter-landscapes to indicate that there could be forms beyond the landscape stereotypes.

Cícero’s map story left more open questions than answers that I was even unable to find even after re-reading the interview text for the fifth time, although his mapping was clearly a way to show his resistance to the processes of “uncontrolled capitalism.”

¹⁴⁰ Interview with Cícero, July 09, 2009. The interviewee’s name has been changed to maintain his anonymity.

“Seeing” Through Maps¹⁴¹

On the previous pages I have carried out a detailed reading “between the lines” of mental maps of the Cariri region. It should be pointed out that these drawings are far more than scribbled dots, lines, polygons, and words on a sheet of paper that look shaky, inaccurate, or trivial.¹⁴² Downs & Stea (1977, p.12) affirm that these maps can be entertaining for the reader, but they also require a deeper reflection in order to justify the use of mental maps as serious research:

These examples are amusing, thought-provoking, truthful, and eye-catching, but they are scarcely sufficient evidence to support our claim that cognitive mapping is vitally important and that it is worthwhile writing (and reading) a whole book [in my case a dissertation chapter] about cognitive maps.

In their book on “maps in minds”, they elaborate their “apology” for mental maps and provide four reasons why we should study them (Downs & Stea, 1977, p.12-27). First, these maps can be a link between way-finding and everyday spatial behavior and reveal “ways in which spatial behavior is dependent on the world as we believe it to be” (p.12). Second, there is no “universal way of looking at the world that everyone must use” (p.24). As a result of this, mental maps of a place, region, country, or any other spatial unit open up multiple perspectives of the world and not a single-map solution. This is particularly relevant for research in cultural geography. A third argument is that mental maps help us transmit a sense of place. Places may

¹⁴¹ The sub-header is an allusion to a book with the same title (Wood, Kaiser & Abramms, 2006) The authors conceive maps as a way of seeing the world: “We must accept the principle that ‘seeing’ is how most of us bring the world into being. We use our eyes to create the world we see. Maps are an ‘eye’ to the world. The more perspectives we have, the more accurate our vision” (Wood, Kaiser & Abramms, 2006, p.101-102). This serves also as a justification for my large collection of mental maps. I was able to record a considerable number of different worldviews expressed through maps.

¹⁴² In a previous research project, I analyzed children’s maps of the world, published my findings in an academic journal (Seemann, 2006b), and presented the results at several geography meetings in Brazil. Not all the geographers considered this “play” with maps a “valid” research topic. I second Hugh Matthews’s (1995) critique of the geographers’ lack of interest in research on environmental perception, sense of place, and “real world settings” despite “the renaissance of cultural geography, with its new focus on ‘ways of seeing’ and its emphasis upon cultural plurality (Matthews, 1995, p.293-294).

“come alive” in these drawings and “environments can be made more legible and imageable (p.27).” Finally, mental maps can also be meaningful for the mapmaker himself/herself, since

Our own self-identity is inextricably bound up with knowledge of the spatial environment. We can organize personal experience along the twin dimensions of space and time. But the dimensions are inseparable – there can be no personal biography of “what” things happened “when” *without* a sense of the place in which they happened. Cognitive maps serve as coathangers for assorted memories. They provide a vehicle for recall – an image of “where” brings back a recollection of “who” and “what”. This sense of place is essential to any ordering of our lives (Downs & Stea, 1977, p.27, original emphasis)”.

With these four reasons in mind and applying them to my map exercise in the Cariri region, I would like to argue that even the simplest line tracing and scribbling could contribute to the understanding of how the region is constructed (carto)graphically. The maps were not only representations of space, but the paper sheet was also used to represent other features, not necessarily linked to space and place. Tim Ingold correctly states that “drawing a line on a sketch map is much like telling a story” (Ingold, 2008, p.90). But what kind of story? The mental maps require a reading between their lines that must go beyond the smooth surface of the paper sheet and establish a link between products and processes and the mapmakers and their regional knowledge and identities. Knowing further details of these “knowledge spaces” – assemblages of linked sites, people and activities (Turnbull, 2000, p.19) – will not necessarily result in “better” or more sophisticated maps, but can contribute to the understanding of how regional maps are used as concepts or discourse tools rather than as representations of space. As Muehrcke & Muehrcke (1998, p.7) observe:

The accuracy of a drawn mental map is largely a reflection of a person’s drawing skill. Those few with a flair for drawing may successfully convey on paper the true character of their mental maps. But for the vast majority of us lacking drawing ability, the resulting pictures on paper won’t do justice to the maps held in our minds. Researchers have struggled unsuccessfully for decades to overcome this problem.

The mental maps serve as narratives and form of expression and communication – a skill and creative ability that Balchin & Coleman (1966) have denominated *graphicacy*.¹⁴³ The interpretation of the mental maps requires a coding of both the textual *and* the graphical elements as well as their relations. Inspired by J.B. Harley’s (1990b) framework for the interpretation of early maps, I conceive the mental maps not as naïve documents, mirrors or transparent windows on the world, but as texts. The challenge for the researcher consists of reading “between the lines of the images” in order to unveil discourses, worldviews and hidden scripts or meanings, messages and motifs.

Maps – including mental maps – are culturally specific and must be read within the context of the society in which they were produced (Harley, 1990b). Their interpretation consequently turns into an exercise of decoding:

Cartographers, so often concerned with teaching people how to make their maps better, have not always learned how to study maps well. Most importantly, if maps are deeply embedded in distinct cultural and political systems, then the study of maps becomes a complex task of translation (Orlove, 1993, p.43)

The map exercise permitted insights into the regional worldviews and “cartographic culture” of the undergraduate students.¹⁴⁴ What do the students know about cartographic principles and the region? The more than 350 mental maps showed a certain “difficulty” to link cartographic literacy and regional knowledge, map-drawing and experience of place.¹⁴⁵ Mental maps are not “concrete” structures in our heads, but cognitive processes determined by different

¹⁴³ According to Balchin and Coleman (1966), there are “four aces in the pack” that are essential for teaching and learning: *graphicacy*, *literacy*, *numeracy*, and *articulacy*.

¹⁴⁴ Remembering Matthew Edney’s (1997) definition in chapter 3, cartographic culture entails the understanding of how a society, nation, or a group of undergraduate students in the Cariri region represents space and place cartographically.

¹⁴⁵ Recent studies on a national scale by Schulten (2001) and Brückner (2006) point out that there exists a correlation between geographical literacy and conceptions of identity.

ways of perceiving, seeing, and understanding the world. The student mapmakers used a wide range of strategies to finish their drawings. In some cases, the maps were mere imitations, simulations of conventions or even “cheat charts”, plagiarized copies from what other students had sketched out in the classroom. Other students were eager to produce and not reproduce maps of the Cariri and creatively added graphical elements, texts, and other personal notes to their drawings. The challenge of this exercise was to represent a region without a clear boundary, different from more distinct forms such as mental maps of the world or countries, states or territories with characteristic shapes that can be easily memorized and “re-represented” (Pinheiro, 1998).¹⁴⁶ The shape of Texas or the basic configuration of the continents and “most important” countries on a world map can be reproduced by almost everyone, whereas a not very well defined mentefact such as the Cariri region could be a major challenge.

The students understood the map exercise in different ways. The maps did not exclusively work as representations of the region, but also served different purposes, from discourse device, regional icon, or stereotyped logo to creative picture messages, mediums to express opinions and attitudes or personal narratives.¹⁴⁷ At the same time, the drawings were made according to the mapmaker’s scale of regional perception, that is, some of the students opted for a more general map-as-a-concept representation, whereas others interwove their large-scale drawings with their own experience of place.

The map exercise was a novelty for most of the students who had not attempted to draw a map of their region before, were not used to utilizing cartography to represent regional

¹⁴⁶ See, for example, Thomas Saarinen’s (1987, 1999) study of almost 4,000 mental maps of the world drawn by college students and Richard Francaviglia’s (1995) cultural-geographic analysis of the shape of Texas.

¹⁴⁷ Influences such as the powerful imagery and wordiness of the national and regional media and the political traditions and discourses in the region must not be neglected as impact factors on the map drawings.

knowledge, and had different drawing competences and skills. In Denis Wood's (1992) words the mapmakers in the Cariri region do not live in a "map-immersed society" which entails a permanent and intensive exposure to map products that leave persons, groups or society in a state of

being so surrounded by and so readily and frequently consulting and producing maps as not to see them as different from the food that is brought to the table or the roof that is overhead or the culture in general that is apparently reproduced... *without effort* (Wood, 1992, p.34).

My attempt to employ mental maps as a cultural-cartographic methodology was a plea to consider these drawings as a valid strategy on the cultural-geographic research agenda, taking into account that studies with and of mental maps are still widely considered the domain of behavioral geography and cognitive psychology.¹⁴⁸ My study aimed to access these maps through qualitative and visual methods that included the coding of visual elements, required my engagement in the exercise, and led to a lot of speculations that are also a result of the blurriness of the regional boundaries. Travlou et al. (2008) have carried out similar research on how teenagers define their territories by using "place mapping" which they define as

a technique used to locate places that play a significant role for youth, both positively and negatively, and to provide a common point for discussion among a group of teenagers. The method offers the researcher a map and recorded conversations of young people's spatial experiences with regard to the dialectics of inclusion and exclusion from public space (Travlou et al., 2008, p.310).

In their study, the authors were aware of possible short-comings in their mappings:

Cognitive mapping in the form of drawing and map making does not show in full spectrum the maker's spatial relationship with his/her surrounding world. Drawing and map making create a very selective (birds-eye view) of the

¹⁴⁸ In the recently published fifth edition of the *Dictionary of Human Geography* (Gregory et al., 2009), David Ley's entry for mental maps/cognitive maps still maintains the same tenor as in the original text he wrote for the fourth edition of the dictionary ten years ago (Ley, 2000, 2009). Mental maps are still represented as research objects from the 1970s. Even the text is mainly written in the past tense, and the word count for the entry has been cut to half of its previous size. Have mental maps become less relevant for human geographers?

individual's surrounding environment, leaving out a lot of possibly useful information (Travlou et al., 2008, p.311).

In addition to this, the mapmakers may tend to reproduce stereotypes and generalized images of place that are produced in their own environment or society. The classroom setting and the presence of a researcher may have prevented some of my students from drawing their maps since they felt

intimidated by a map making group activity, feeling that they would have to prove their drawing skills in front of the entire class. Map reading, on the other hand, is generally an easier task which does not require advanced skills from participants, so long as they are familiar with maps (Travlou et al., 2008, p.312).

The emphasis in this chapter was on the culture(s) of map drawing and on how mental maps can be a valid contribution to qualitative research in cultural geography. Different from what "Dabble" said in the opening quote for this chapter, maps from the head are not erroneous, but can enrich the cultural geographer's understanding of the world. However, maps alone do not "speak" enough about what they represent. For this reason, I will "map" some mapmakers and examine the regional knowledge in the drawing process in the next chapter in order to provide some in-depth details of these mappings within their context.

Chapter Six: Mappings

Mapping Regional Knowledge in Interviews

“The map is the soul of geography. If one doesn’t study through maps, one does not remember anything the next week You have to see images. Visual memory is much more important than auditory memory”
(Miguel).¹⁴⁹

Miguel, one of the persons in the Cariri region with whom I had a conversation on regional knowledge and cartographic representations centers maps in the heart of regional geography. For him, they are part of the visual memory of the region that combines images and stories and creates regional references.

In the previous chapter, I was able to gain a notion of how local people express their ideas about the Cariri region through sketch maps. On the one hand, the interpretation of these mental maps showed a wide range of different mapping solutions, taking into account that there is a considerable number of official and popular definitions of the regional boundaries that may have influenced the mapmaker. On the other hand many students failed to engage more deeply with the regional geography and its maps. In the most extreme cases, lack of reflexivity and a certain fear of cartography have resulted in a cartographic representation without a real space.

In order to obtain further details about regional identity and mapmindedness, I decided to initiate a “deeper”, more contextualized investigation face to face. Instead of collecting mental maps and randomly and hurriedly record what, how, and why students in classrooms represent the region in certain ways, I selected a group of local people who agreed to have a conversation with me on the region, its identities, and its representations, including the drawing of a regional mental map. I carried out a set of qualitative interviews about the Cariri and its cartographies that

¹⁴⁹ Interview with Miguel, June 29, 2009. All the interviewee names are pseudonyms. See footnote 154.

allowed me to link mental maps to regional knowledge and personal geographies and cartographies and provide clues to the unanswered questions of the mental map exercise from the previous chapter.

The main aim of my interviews was to find out how the interviewees engaged with the geography, history, and the mapping of the Cariri region. How did they define and represent their region in a broader sense? How do they draw their maps in particular? What “different” or even invisible maps do exist? How is regional knowledge created and used? How is it linked to cartography?

Setting the Stage for the Interviews

The initial contact for my interviews was the Instituto Cultural do Cariri (ICC) in Crato.¹⁵⁰ The institution was founded in 1953 and shaped after the model of other academies of letters in Brazil that were inspired by the French Academy.¹⁵¹ According to the minutes of its foundation meeting, the mission of the ICC is “the study of science, literature and arts in general and the history and political geography of the Cariri in particular.”¹⁵² Before my arrival to the Cariri region, I established contact with the director of the institution, Manoel Joaquim Aquino, who allowed me to see the register of the ICC member and who opened doors to get in touch

¹⁵⁰ Due to the historical rivalry between the towns of Juazeiro do Norte and Crato, scholars in Juazeiro do Norte created their own cultural institute, the *Instituto Cultural do Vale do Cariri*.

¹⁵¹ Originally, these societies served as literary circles and keepers of the vernacular language, “consisting only of men, ... holding informal meetings at which the talk was restricted to literature, ... there was a minimum interest in the world of fashion or the world of politics” (Vicent, 1901, p.4).

¹⁵² *Ata da sessão de fundação e instalação do Instituto Cultural do Cariri e de eleição de sua primeira diretoria*, 04 October, 1953 (copy from the original, 4th Notary’s Office Maria Júlia, Crato, Brazil).¹⁵³ The interviewees are from a wide range of professions, including lawyers, medical doctors, university professors, musicians, and retired bankers.

with other interviewees, both ICC members and local thinkers and artists.¹⁵³ During the months of June and July 2009 I collected a total of 24 interviews: 22 recorded interviews with a duration between 25 and 80 minutes and two shorter non-recorded informal conversations.¹⁵⁴

I decided to keep the number of conversations in a range “somewhere between 15 and 25 interviews” following Gaskell’s (2000) caveat on data saturation and size of corpus. Gaskell alerts that “more interviews do not necessarily imply better quality or more detailed understanding” (Gaskell 2000, p.43), since there is only a “limited number of interpretations or versions of reality” (p.43). Despite their unique and individual characters, interviews normally reflect social processes and tend to repeat viewpoints and answer patterns at a certain point which leads to a “meaning saturation” when “the researcher realizes that no new surprises and insights are forthcoming” (p.43). On the other hand, an oversized corpus of transcriptions may result in the loss of information. In other words, the more pages a researcher has to code and interpret, the higher the risk to leave out important details and the longer the distance to the interviewees, for

[i]n order to analyze a corpus of texts from interviews and to go beyond the superficial selection of a number of illustrative quotations, it is essential to almost live and dream the interviews – to be able to recall each setting and respondent, and the key themes of each interview (Gaskell, 2000, p.43).

I selected many of my interviewees according to their availability and willingness, their reputation as connoisseurs of regional history and geography, and my personal social network of

¹⁵³ The interviewees are from a wide range of professions, including lawyers, medical doctors, university professors, musicians, and retired bankers.

¹⁵⁴ The quotations from the interviewees that I use in the text are my own translations from the Portuguese. I tried to preserve the different forms of expressions (e.g. colloquial Portuguese specific to the region, metaphorical language, etc.) and the sometimes (awkward) word choices made by the interviewees. Interviewees quoted for the first time are referenced in a footnote. After that, they are indicated in italics after the quotation when the inclusion of a name is necessary to clearly identify the source. In order to protect the identity and preserve anonymity of my interviewees I used pseudonyms for them. A complete list with further details about the interviewees and interviews can be found in appendix 2.

contacts. Some of them were indicated or “recommended” by other interviewees. Their ages ranged between 30 to more than 80 years; most of them were male (only five women) and with strong ties to the region.¹⁵⁵ Almost all of them can be considered “natives,” either from Crato or the neighboring towns, while others came to live in the region either on purpose or “by accident.” Sandra, for example, grew up in a Northeast Brazilian capital city on the coast and decided to apply for a position at the regional university in 1994 without knowing anything about the Cariri. Arlene is widely known as Arlene do Araripe (“Arlene of the Araripe Plateau”), although she was born in a small village on the coast of Ceará.¹⁵⁶ Her father was hired as an auxiliary worker for engineering and survey projects within the state and had to move to many different places. As a result of this, almost all of her father’s children were born away from the Cariri, although Arlene’s father was a native from the town of Santana do Cariri. Humberto is another example of mobility. As the son of a banker who was frequently transferred between different towns in Northeast Brazil, he was born in Salgueiro in the state of Pernambuco “by geographic accident.”

The provenance of the interviewees may reveal details about their mobility, but does not provide further information on the migration history of their families and where the previous generations came from. There are many cases of extraordinarily large families (between 5 and 15 siblings) that moved to the region in the late nineteenth century or early twentieth century due to the difficult conditions in the *sertão*. At that time Crato was not only the commercial center of the region that attracted small independent traders from the interior, but also was renowned as the only place in the south of the state where one could obtain a solid education. In order to get a

¹⁵⁵ Women are underrepresented not only in the ICC, but also among the thinkers of time and space in the Cariri.

¹⁵⁶ Arlene’s memory of her birth place is almost inexistent. She remembers the name, but does not exactly know where it is.

better education, families from the backlands had to move to a bigger town. Education required migration.

Women suffered and still suffer from the male-centered culture in Northeast Brazil (Marques, 2006). Two of the female interviewees confirmed that women were not the priority in education. At best, they received private lessons at home since those “who gave the orders were the men,” while “women were made to stay at home, to have children, all these things. They had no need to study.”¹⁵⁷

As for the interview conditions, many interviews were carried out in “normal” settings, that is, the interviewee’s living room, kitchen, veranda or office. In one case, I recorded the interview “on the move” during a hike on the Araripe Plateau. One of my interviewees volunteered as a “go-between” and arranged at least two meetings for me in which he also took part. My intent was to create the atmosphere of an informal conversation between friends or acquaintances and not a formal investigation. I worked out a loose set of questions that dealt with central aspects of regional life such as history, geography, culture, and identity. Depending on the interviewee’s interest and inspiration, I asked for further details of their own life history in the region, their activities and the regional knowledge they would like to share. Most of the interviewees accepted the challenge of the map exercise and were willing to sketch and explain their mental maps of the Cariri.

The interviews did not only reveal what the interviewees thought about the region, but also what they thought they had to tell me about it or what I expected them to know. Taking into account my status as a non-native academic researcher, I had to tackle and rework issues of

¹⁵⁷ Interview with Jandira, June 12, 2009. Clara’s case is even more extreme. She was born as the first daughter among six older brothers and she did not fit into her father’s worldview: “He considered this bad, and spent a week without entering the room. He didn’t want any woman in his house” (interview with Clara, June 16, 2009).

positionality and (self-)reflexivity due to my hybrid identity. Farhana Sultana nicely describes these constant negotiations of locations and subjectivities and the tensions and instability of fieldwork in a “foreign place”:

The borders that I crossed, I feel, are always here within me, negotiating the various locations and subjectivities I simultaneously feel a part of and apart from. The ambivalences, discomfort, tensions and instabilities of subjective positions became important to be reflexive about and work through, where the contradictions in my positionality and in-between status had to be constantly reworked as I undertook fieldwork (Sultana, 2007, p.377).

During the interviewing I permanently had to readjust myself to whom I was talking to and how they “classified” me. As a result of this shifting positionality, there was always the risk of obtaining answers that were not necessarily what the interviewees themselves thought. Using the words of one of my interviewees, some of the replies were a mechanical “machine-gun toting of stereotypes”¹⁵⁸ or a kind of lesson about the region rather than the sharing of personal knowledge of regional history and geography. When I started my interviews, I initially thought that my questions about the Cariri, its definitions and geographies were too superficial. However, a reading between the lines of the answers and provocative follow-up questions helped me understand how and why the interviewees reacted in a determined way.

One example is my interview with Miguel. My initial question was what I, as a *gringo* or outsider¹⁵⁹, should know about the geography of the Cariri. Miguel replied in a textbook manner and mentioned facts and figures about the Araripe Plateau such as its dimensions, geology, the number of springs, the regional hospitality, etc. However, during our interview, he went beyond the official discourse and revealed to me how his own personal biography is intimately related to the region:

¹⁵⁸ Interview with Sandra, July 07, 2009.

¹⁵⁹ Some people even used the label “extraterrestrial” in order to classify my origins.

Well, I am a boy from a bagasse¹⁶⁰ sugar mill, from the gates of the cattle corral. My father was a farm owner. And I was born into that life that was far more blissful than you could imagine, in the middle of that plenty, in the middle of that greenness (*Miguel*).¹⁶¹

During my conversations with my interviewees, I had to deal with shifting identities. Some of my informants were very quick to reproduce the taken-for-granted facts about the region as if they were acting as official representatives of the Cariri. However, when I insisted on a certain topic or question and made the interviewee feel more comfortable, I was able to obtain more personal and intimate viewpoints about the region and its histories, geographies, and discourses.

Defining the Cariri Region: Meanings and Metaphors

In order to “break the ice” with my interviewees, I usually initiated my interviews by asking for a list of five keywords that they associated with the Cariri region. Among the keywords were stereotypes, visual metaphors, discourses, but also personal impressions that I discussed, defined, explained, or even de-constructed together with the interviewees.

Many keywords referred to the natural landscapes of the Cariri. The Araripe Plateau figured as a visual icon for the interviewees who mentioned terms such as nature, ecology, springs, vegetation, forest, and greenness. These images, on the other hand, inspired other keywords that described personal reactions to the landscape, e.g. beauty, tranquility, harmony, and energy.

¹⁶⁰ Also *megasse* in English. Original term in Portuguese is *bagaçó*, the leftover fibers after the sugarcane has been crushed in the mill.

¹⁶¹ Interview with Miguel, June 29, 2009.

Regional culture represented a second thematic cluster of keywords. Many interviewees referred to the diversity of popular culture that entailed not only artistic expressions such as music, poetry, and woodcut art, but also religiosity, regional history and typical food. In some cases, culture was also understood in its original etymological sense as agriculture: a *uberous*¹⁶² and fertile region, sugarcane fields, and “sweet” soils. More academic renderings defined the Cariri as an economic pole, an urban concentration and a region that creates attachment and isolation at the same time.

Through the interviews it became apparent that education in geography and history at school has not been focused on the regional reality, but on more general issues and topics. Despite its uniqueness and peculiarities, the region has not turned into a major object of study in the classrooms. General knowledge and universal facts such as astronomy and the interior structure of the earth did not serve to establish a link between education and regional reality.

But we had teachers who taught us about stars, who taught that type of geography that starts with the center of the earth, I don't know what, after the stars there was the center of the earth, I don't know what, physical geography (*Clara*).

Geography has been reproduction rather than production of knowledge. Research on regional geography has not become a central issue: “No, nobody did that. We only did what the book told us” (*Clara*). This kind of education could have stalled regional imagination and image production, leading to a lack of historic perspectives and interest in knowing about the region. Details about Mesopotamia and French kings were taught as signifiers without meaning:

[My teacher] talked about kings, about Mesopotamia, talked about I don't know which place, I don't know, and at that time I lived in a street with the name Tristão Gonçalves. Professor, who was Tristão Gonçalves? And he did not know the answer. But I had already honed [my knowledge] to know why it had that name. There was a resident with that name, who was Tristão Gonçalves? And he

¹⁶² In the sense of fruitful, abundant, copious, or plentiful. *Uberous* is far from being a frequently used word in English. Neither is the Portuguese term *ubertosos* of common use.

[the teacher] told me who was Louis XIV, Louis I-don't-know-his-number, he knew who those old guys were.¹⁶³

One of my initial questions was to ask the interviewees for *their* definition of the Cariri. At first glance, many answers reflected a combination of memorized phrases, official administrative divisions and stereotypical criteria of delimitation such as climate and vegetation. These replies were given in an almost mechanical way rather than being the result of a deeper reflection. However, many interviewees were aware that this delimitation can only serve “didactic purposes.”¹⁶⁴ Hermano, for example, mentioned the fuzziness of boundaries and limits:

This is something that I realized here. The landscape is not always a criterion that can differentiate a region from another, a place from another. If there is not a sign saying that from this point onwards it will be that place.¹⁶⁵

Others proposed a change in the name to indicate that it was not the Cariri valley itself, but the Araripe Plateau that is responsible for the uniqueness of the region. For this reason, “you should consider the Cariri as all the towns that are embraced by the Araripe Plateau” (*Miguel*). One of my interviewees saw the well-marked horizon of the tablelands as the limits of the world when he was a child: “I thought that the world would end behind the plateau, as if there was nothing beyond it. That’s funny. Until that point we lived, as if it we were in a hole. You tried to look around the mountain to see what was behind it” (*Wellington*).¹⁶⁶

Asking for details beyond this discourse, several interviewees provided criteria related to culture, language, affect and feelings. Anderson mentions common cultural origins, aspirations, climate and the processes of regionalization. For him, all these elements could serve to delimit an

¹⁶³ Interview with Teresa, July 01, 2009.

¹⁶⁴ Interview with Anderson, June 16, 2009.

¹⁶⁵ Interview with Hermano, July 03, 2009.

¹⁶⁶ Interview with Wellington, July 01, 2009.

area with common characteristics just for the sake of it. Others such as Felisberto referred to the indigenous past of the Cariri. The first inhabitants of the region, the Cariri Indians and their almost complete erasure from the official history records left space for speculation and mythological musings. Felisberto sympathized with the native peoples and believed that the name Cariri itself is a powerful term to define the region:

See, the best definition of the Cariri that I have heard is the one by the Indians themselves. They defined the Cariri with one word, the word Cariri is theirs and means “sad”, but at the same time it is not sad, it is to inspire a tranquility so deep that it resembles sadness, you understand? Maybe because they had watched the Cariri from the highest places, in a time when there was no movement such as this town here. So [the view] transmitted tranquility.¹⁶⁷

The Cariri is not only considered a geographic area, but can also be defined through criteria of human relatedness such as feelings of belonging and cultural and historical identity, shaped by social networks of friends, family and origins, and their affective boundaries:

These are locales I identify with in a certain way, either because I have an ancestor, or because I have a friend, or because I have a cultural reference in that region. So this defines the Cariri for me that is well determined and delimited, geographically speaking, but which is at the same time (...) my maternal lineage [Exu].¹⁶⁸

Arlene do Araripe says that she “feels” the region:

Arlene: “I think this all [the towns I mentioned above], are Cariri. There is something, you feel the Cariri when you are in these places”

Me: “How do you feel it?”

Arlene: “I think I have got... I think because of the people, the popular language the expressions, the accent, I don’t know, I identify very much, I think there is a big similarityThe Cariri for me, in my mind, on my map, when I close my eyes, I imagine the Cariri, I imagine the Chapada and the towns that surround this plateau, you know, it’s like a drawing that I have....”¹⁶⁹

¹⁶⁷ Interview with Felisberto, June 10, 2009. Felisberto’s etymological interpretation of the word Cariri can be found in Figueiredo Filho’s (1964) *History of the Cariri*. The quote is originally from Pinto (1935, p.135) who described the Cariri Indians as “melancholy, quiet, and silent.”

¹⁶⁸ Interview with Roger, June 24, 2009.

¹⁶⁹ Interview with Arlene do Araripe, June 23, 2009.

I considered Arlene's last sentence an invitation to have her draw a mental map of the Cariri (figure 6.1). In her map, the south is on the top, a view from the Cariri (most towns are shown with their initial letters) to the massive structure of the Araripe Plateau that Arlene indicates with wavy lines. She makes clear that the tablelands do not delimit the Cariri, but that the region in her vision must go beyond them reaching into the neighboring state of Pernambuco. For her, the *chapada* is an identity marker and connector and not a cultural barrier and differentiator. Arlene affirms that proximity defines the belonging to the region: the further away, the weaker the influence.

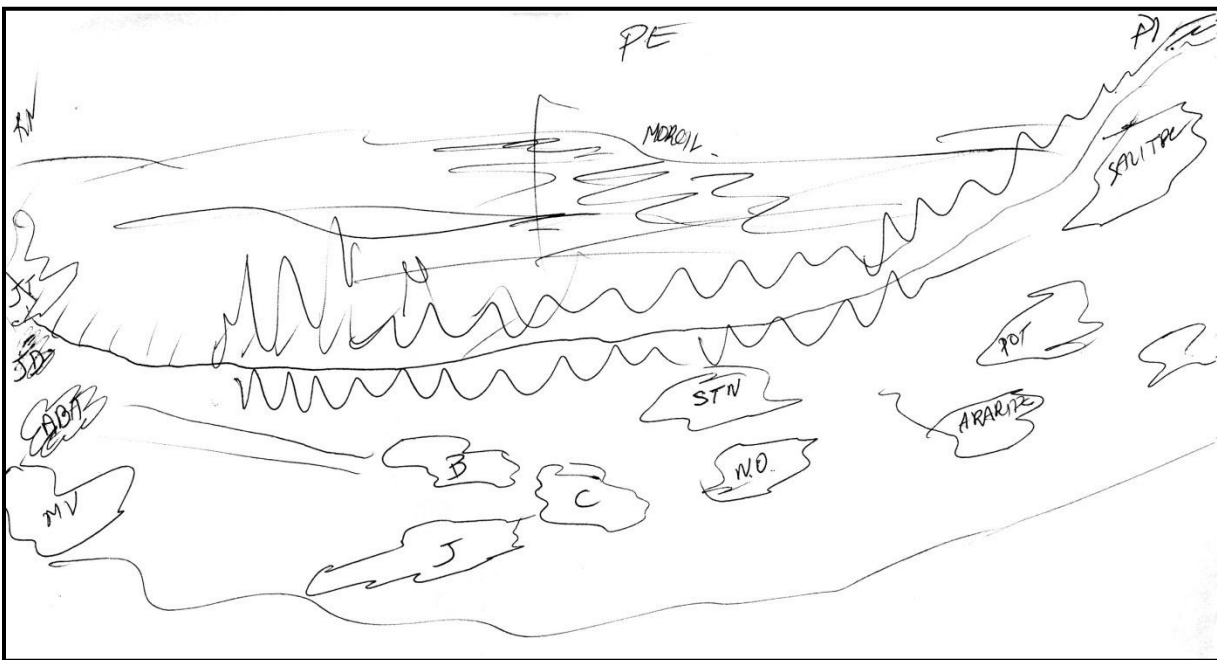


Figure 6.1: Arlene's mental map of the Cariri

The purpose of my asking for definitions was not to obtain explicit answers, but rather to point out the ambiguity of regional concepts and ideas and contribute to the understanding of how the interviewees divided their regional reality through discourse, images and thoughts.

In this context, one of my interviewees de-constructed my purposefully superficial question about the definition of the region when she stated that the Cariri is not definable:

I think there is a very strong temptation to think the Cariri in one go, you understand. And for me this is definitely more and more difficult to do. I think people [pause], people try to do this – obviously there are reasons to do this – because in fact you need a definition of this space that is quick and palatable (*Sandra*).

The lack of a critical approach to regional history and geography has led to the creation of time- and spaceless stereotypes that define the region and that, in Sandra's words, paralyze signs and "plaster" (in the sense of restrain) the narratives without creating any form of identification with the place: "It is very strange, because we can only talk about the Cariri, beginning with the memory of the Cariri. So we remain hostages of the forms that define what the Cariri is, always" (*Sandra*).

This creates space for regional reification and the use of organic metaphors. Nestor, my oldest interviewee and a regional authority and reference, for example, treats the Cariri as if it were a living personality when he speaks as if he were quoting from a textbook (which begs to agree):

Among all the regions in Ceará, the Cariri region is a privileged region. We have two Cariris in the NE: The New Cariri that is our, and the Old Cariri that is in [the state of] Paraíba. There, it is dry, here it is uberous. It's fertile. Hence the New Cariri, ours, developed and projected itself in the entire region of the northeast, be it from an economic or from a cultural point of view.¹⁷⁰

During our conversation, Nestor emphasizes the attractiveness of the region:

The Cariri is uberous, the region to which every visitor is heading to build his residence, because the Cariri receives everyone, people of good-will, as it is written over there on the column at the old railway square.

¹⁷⁰ Interview with Nestor, June 09, 2009.

The last sentence is used as an official proof of his opinion, literally “cast in stone”¹⁷¹, that is, on a bronze plaque that ornaments the statue of Christ-the-Redeemer¹⁷² in the center of the railway square in Crato (figure 6.2):

Welcome.
On this soil, there is space
for all the people
of good
will.



Figure 6.2 Christ-the-Redeemer statue in the railway square in Crato and welcome plaque in detail (photo by author)

Nestor’s map is oriented to the east and includes 11 place names and the J-shaped form of the Araripe plateau. In the space below the map, he added a written statement about the region:

The major vocation of Crato is its culture. Hence the *region* is denominated the *capital of culture*. And this without mentioning its economic side, by the fact that Crato has organized the EXPOCRATO since 1944, proving its strength [or even superiority] in more than one sector (*my emphasis*).

¹⁷¹ See Nuala Johnson’s (1995) reflections on monuments, geography, and nationalism. Johnson argues that public monuments can be sources “for unraveling the geographies of political and cultural identity” (p.52), act as “circuits of memory” (p.63), and open “insights into how public imagination is aroused and developed” (p.63).

¹⁷² In fact, the Christ-the-Redeemer statue is not an exclusive icon of Rio de Janeiro. Smaller versions of the monument can be found in many other places in Brazil.

In this short statement “cast on paper” (figure 6.3), the reified town of Crato becomes a synonym of the entire region. It is the town and not the human production of space that leads to the development. Expressions such as “the Cariri receives” or “Crato has organized” are *geographisms*, i.e. metaphors that turn territories, regions or other spatial units into “political forces, actors or heroes in history” (Lacoste, 1988, p.65).

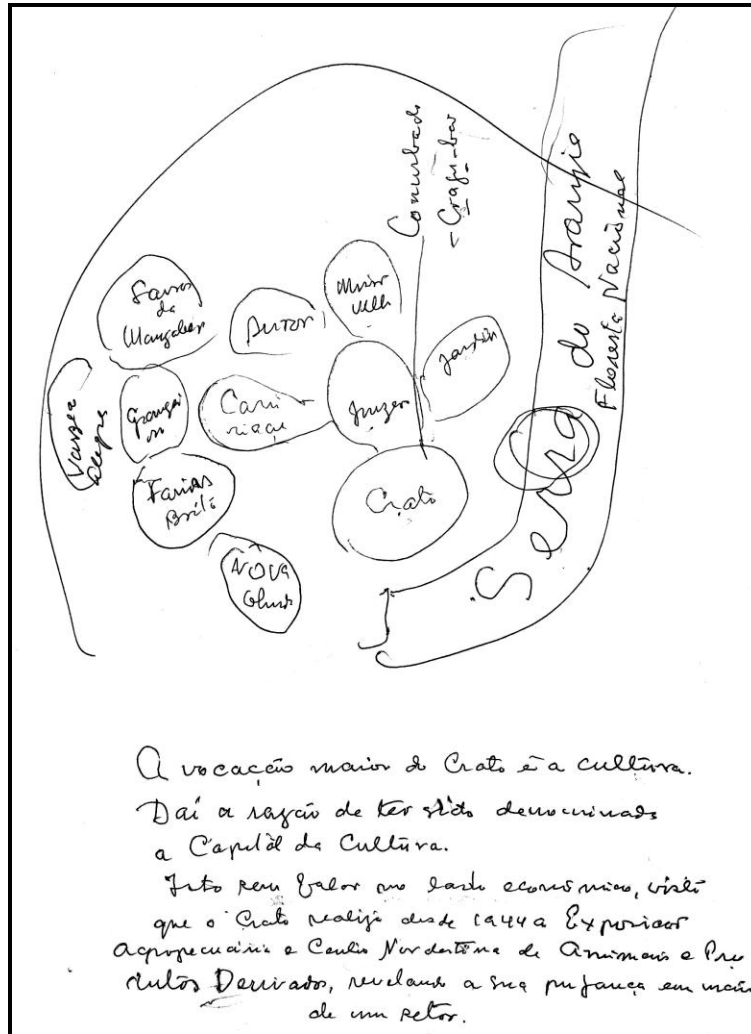


Figure 6.3: Nestor’s mental map of the Cariri

This form of reification of space transmits the idea that it is not the inhabitants, but the region that receives the new immigrants with open arms. The Cariri creates its own personality, an idea that scholars such as Fox (1943) and Sauer (1941) converted into a geographical

concept.¹⁷³ Several interviewees mention the oasis metaphor from Senator Pompeu's mid-nineteenth-century *Diccionario Topográfico e Estatístico da Província do Ceará* (Brasil, 1861) in which he compares the region to an oasis where people can find a shelter in difficult times. Probably this idea can be traced back to the Greek historian Herodotus who, more than 2400 years ago, praised the qualities of the Nile River:

... and I thought that they said well about the land; for it is manifest in truth even to a person who has not heard it beforehand but has only seen, at least if he have understanding, that the Egypt to which the Hellenes come in ships is a land which has been won by the Egyptians as an addition, *and that it is a gift of the river...* Herodotus, 2008, p.9, *my emphasis*).

Several interviewees related this comparison to the Cariri. Applied to the region, they deduced that “if Egypt is a gift from the Nile, the Cariri is a gift from the Chapada. This is valid, I also think that it is our telluric space. This means, with what we identify, which is the contiguous space of the *chapada*, the valley” (*Roger*).

This comparison is stressed by the use of the oasis image that distinguishes the Cariri from the surrounding dry backlands and makes it a unique place to live. Water resources, humidity and vegetation have created a favorable setting for human settlement: “We are a kind of green oasis with perennial water springs The Cariri has always been a green point, surrounded by a vegetation of grey shrublands in all directions” (*Humberto*).¹⁷⁴

For some of my interviewees colors were an important factor for the definition of the region. The greenness of the vegetation was frequently compared to the gray hues of the dry sertão: “Around this plateau, everything is a landscape of gray which is of the shrublands. For

¹⁷³For a discussion of the term “geographical personality” and its historical origins, see Dunbar (1974).

¹⁷⁴ Interview with Humberto, July 02, 2009.

this reason, it distinguishes itself in a certain way, because it has a differentiated nature” (*Felisberto*).

The greenness of the landscape is used as a visual criterion of distinction from the gray and dry sertão. The color green turned into a powerful metaphor: “It’s really the green [color], because it is an atypical region in all manners. You see the whole state, even when you fly over it, it is exactly the greenest region” (*Paulo*).¹⁷⁵

Different from the Brazilian Amazon where the color green is still frequently associated with diseases and inhospitable rain forest, the greenness of the Chapada even gains a therapeutic effect: The green is tranquilizing and “even recommendable for our vision. You enjoy it and do not get tired, it is even relaxing” (*Fernando*).¹⁷⁶

Humberto refers less to his own experience and more to the more than 2 million pilgrims who come from the semi-arid backlands, “not only to reinvigorate their faith, as they say, but also to clean their vision from that grayness by looking at the foothills of the Araripe Plateau where they see the abundant vegetation” (*Humberto*).

The intensity of the greenness seemed to make the habitants forget that the region can also be vexed by periodic droughts that are removed from the “evergreen” image of the Cariri:

Here in the region, you may have seen it, it is never dry, always green. This characterizes the Cariri very much. And when one enters the Cariri, coming from the sertão, when one enters the Cariri, there is the green vegetation... (*Jandira*).

As a film producer and director, Teresa is aware of the rapidly changing landscape colors that may affect or even delay the production of movies in the region. Telling about her experience as a filmmaker in Northeast Brazil in the 1970s, she mentions the difficulties of

¹⁷⁵ Interview with Paulo, July 05, 2009.

¹⁷⁶ Interview with Fernando, June 23, 2009.

production in the northeast Brazilian backlands. The film reels had to be sent to the south to be developed and could take more than a month to return. Especially for movies that emphasized the regional landscapes this could have resulted in a long delay since the vegetation had already changed its colors:

For a new sequence, you have to wait another year. Why? The whole vegetation changed. After 30 days, it was impossible to continue the sequence. What a difficulty! And they produced films this way (*Teresa*).

Despite the color changes in the landscape, green turns into a trademark for the region. Fernando, who was born in the far drier lowlands of the Jaguaribe region further to the northeast, compares the vegetation of his home region to the Cariri: “Here it is always green all year long... [But in Jaguaribe] ... when the summer time is over, the leaves become dry ... and have a gray color. Here, at least, it is a kind of oasis” (*Fernando*). In the words of another interviewee, the oasis metaphor evokes an image that is easily adopted:

I think the vision I have got of the Cariri is a vision closely tied to an oasis, something linked to this region which is a unique region because there is a whole world of dried out, semi-arid lands, and suddenly, you’ve got this small oasis here, so I think, in my mind, I delimit by greenness... Even when we arrive by airplane, when we come by car ... we can already see the basic difference between one landscape and the other (*Pedro*).¹⁷⁷

Clara uses the term oasis as an academic concept when she states that “if it were not for the humidity of this entire area, provoked by the [water] infiltration of the Araripe Plateau and the whole history of the sedimentary basin, we would not have this green island. We would not have this distinct place in the middle of the *sertão*” (*Clara*).

The image of an oasis in the middle of sterile lands emphasizes the human-environment interactions in the region. The presence of the green tablelands almost gains a deterministic connotation. The natural conditions are not only held responsible for the agricultural

¹⁷⁷ Interview with Pedro, July 05, 2009.

development of the region, but are also seen as a crucial impact on the human agency. The Cariri is both a green island for agriculture and public spirit:

The Cariri has always been an oasis, as you know, of culture and civic-mindedness¹⁷⁸ because of the Chapada. Everybody who lived in the dried out *sertão* came here during the droughts in search for cooling relief in life (*Miguel*).

For some of my interviewees, living in the Cariri is not a taken-for-granted condition, but a privilege. The “oasis in the horseshoe of the plateau ... is a big birthplace, a birthplace of ecology, a green belt” (*Teresa*).¹⁷⁹ As a result of this, the Cariri has attracted many refugees and “people of good will” (*Nestor*) to “take roots” in the region. Miguel’s description of this migration process conjures up an Edenic image of the region: “And here at least they found water, abundant and good water, and a mild climate. And here they stayed” (*Miguel*). The Cariri turns into a promised land. The climate is healthy and the landscape is a visual healing for the *sertanejo*: “There on the top the climate is cool, it’s healthy, it’s good, and besides all this, it is the cooling relief for the people from the *sertão*” (*Miguel*). The Cariri is not only considered a gift of nature, but “this plateau is God’s blessing of the Cariri” (*Miguel*).

Humberto contextualized the migration to the Cariri when he mentioned the considerable number of pilgrims from the dry backlands that visit Juazeiro do Norte every year. Different from Crato, the “capital of the Cariri” (Petroni, 1955b), Juazeiro do Norte is composed of a population predominated by immigrants from other regions in the Northeast, especially from the state of Alagoas. Popular catholic beliefs mixed with Biblical prophecies turn the Cariri into a promised land for the pilgrims:

It is exactly as I said. The Cariri is the harbor of dreams for the people from the semi-arid [shrublands]. Padre Cícero said that here would be the safe harbor for

¹⁷⁸ *Civismo* in Portuguese, in the sense of “public spirit” or “community spirit.”

¹⁷⁹ *Celeiro* = barn, storage place; but here in the sense of birthplace, hearth.

the shipwrecked of life.... I would say that the Cariri is an El Dorado for the populations of the backland, because here they saw a prodigal¹⁸⁰ natural landscape, with possibility to raise their children (*Humberto*).¹⁸¹

These Edenic images of the region mingle with other powerful metaphors. One interviewee called the Araripe Plateau the "mother of the Cariri" (*Alberto*)¹⁸², alluding to a poem from the 1950s, in which the local writer José de Carvalho evoked the image of the tablelands as a symbol of Mother Nature's fertility:

You open your fecund breasts, blossoming in springs of crystalline and perennial waters that descend chanting between the rocks of the ravines and that will irrigate and fertilize the blessed lands of those who love you (Carvalho, 1955, p.97).

According to this vision, the region is the place where "people from outside take roots and from where they do not leave anymore" (*Nestor*). The Cariri became a Promised Land and a real personality that invites people to stay: "The Cariri is the land of paradise. It is the land of attraction, the land of beauty that receives everyone with a hug. Here is, I repeat, the place for all the people of good will" (*Nestor*).

One of my interviewees even went beyond this root metaphor when he proposed a visceral geography of the Cariri: "The man from the Araripe Plateau is umbilically tied to his [native] land, similar to a tree whose roots suck the nutrients from the soil in order to live" (*Humberto*). Trees, roots and trunks describe the place-boundedness to the Cariri and show the

¹⁸⁰ Prodigal in the sense of yielding or abundant.

¹⁸¹ This paradisiacal vision even becomes evident in the landscape. All the streets in downtown Juazeiro do Norte are named after Catholic saints, while the ascent to the Padre Cícero's statue on the hilltop of the *Horto* (Garden) includes the crossing of the Jordan river. On the way up, the different stages of the crucifixion are reproduced (including a rock with a small cavity where the Virgin Mary supposedly had kneeled down), while a 40-minute walk on the hill can take the pilgrim to a small chapel named the Holy Sepulcher.

¹⁸² Interview with Alberto, June 09, 2009.

unconditional love to the birthplace – a telluric manifesto as it is present in the following comment:

I know that I am an unconditional fan of the foothills, the lowlands, the sugarcane fields, the banana plantations, the springs, especially those with abundant and clean water and I feel happy. I have already lived in the trunk of this Araripe Plateau, at the root of the Chapada from where I would never leave, if it all depended only on my own decision. Well, I find this all a paradise here on Earth because I love this land, I like it, I find it very beautiful (*Miguel*).

Drawing the Cariri Region

In combination with all the details about the interviewees' regional knowledge, the mental map exercise was one additional step to understand how the region is drawn, delimited or de-constructed.

I received mixed reactions from my interviewees when I asked them to draw their own maps of the region. After an initial resistance, some of the interviewees turned into “natural scribblers” and spontaneously drew their sketch maps. They readily picked a pencil or pen and started sketching out their drawings as in the following case:

Me: “Would you take the risk and make a map for me?”

Roger: “Of course, I would. Right now? A map that I think is the Cariri? Geographic?”

Me: “Yes, your Cariri.”

Yet others felt uncomfortable and even started to drum nervously with their pen on the table. They showed a “cartographic anxiety” by admitting that they were simply “not good at it” (*Felisberto*) and confessing their cluelessness: “How could I do this?” (*Felisberto*).

This spontaneous reaction is frequently accompanied by a lack of reflexivity and confidence. One of my involuntary draftsmen claimed that “it would be so difficult to make a map of the Cariri” (*Vicente*)¹⁸³ while others did not feel like competent mapmakers and tried to

¹⁸³ Interview with Vicente, June 09, 2009.

talk me out of the mapping exercise, arguing that they lacked cartographic skills and accuracy, as in the following case:

Alfredo: “Oops, that’s difficult.”

Me: “I know it’s difficult, but could you have a try?”

Alfredo: “No.”

Me: “What would the map look like, if you drew one?”¹⁸⁴

At this point, Alfredo referred to the existence of regional maps and town plans that could be bought “somewhere” and that would “solve” my problem:

I think there must be a place here in Crato where a map of the Cariri exists, I don’t remember where. If so I would indicate it to you. If I had known that you would ask this question, I would have searched for it around here (*Alfredo*).

Still, I insisted on his drawing a map (“*what would your would-be map be like?*”), but Alfredo rather preferred to leave the paper in blank than to add towns and places in inaccurate or wrong positions:

Alfredo: “You could imagine how it would be. Putting the towns in their right place. That would be more difficult”.

Me: “Would you like to have a try?”

Alfredo: “No, and do you know why? For example if I made a map, I would put Abaiara here, put Tauá over there, put Araripe here, but it is not here [in this position], it must be here. So it is better not to make it.”

Aware about my geographic and cartographic knowledge of the Cariri region, some of the interviewees initially shied away as in the case of Fernando:

Fernando: “I don’t know how to draw.”

Me: “But I don’t know, either.”

Fernando: “I even don’t have any idea. You will be really disappointed, you see. But don’t ask me to go on this mission...”

Fernando admitted that it is difficult for him to draw a map because he has never studied the topic and that he would rather leave it to those who know better, i.e. cartographers and

¹⁸⁴ Interview with Alfredo, June 15, 2009. Alfredo rejected the map exercise and gave me copies of two of his publications: the history of a local theater group and his own “scribbles and sophistications”, saying that I could find his geography of the Cariri in his books.

mapmakers: “By the way, I think to make a map is such a big art, you know, so I keep on mulling over how a person is able to produce this. A map of Brazil, Brazil is so large, how is it that you are able to do it?” (*Fernando*)

Another argument to avoid the map exercise was that there was no need for drawing a map, because there were already other (and better) maps available. For example, Clara referred to the finished maps in a book chapter she wrote about the geography of the Cariri and did not feel comfortable drawing a map in real time. She felt a little bit “shocked: “My God, I do not know how to tell you. Let me see if I know” (*Clara*).

Anderson detected a “weak moment” in my interview script, when he argued that his map of the region would be a “referential” map rather than a geographic map. “Referential” for him meant the keywords he gave to me and all the manifestations of identity and culture that existed in the region. A map he drew would not be sufficient or adequate to represent this regional universe of thoughts, ideas and material culture with its rich cultural, geographical and historical heritage:

The referential is too big, and I will maybe restrict myself to a little memory of the moment and leave out other basic things, you know”. For this reason, he would provide the contents, but leave the map drawing to me: “Since you are a good geographer, you can draw the outline (*Anderson*).¹⁸⁵

Other interviewees like Sandra admitted their deficient “spatial intelligence” (referring to Howard Gardner’s (1999) theory of multiple intelligences) and their difficulties in dealing with three-dimensional vision. Sandra engaged with social relations, but not with their spatial settings, and was unable to “release” the map from her head:

¹⁸⁵ It should be mentioned that Anderson is also a mapmaker. In the early 1980s he produced regional tourist guidebooks that included a description of the main attractions and a town plan. When I asked him why he did this geographic research, he said that he wanted to “fill a gap and create information to help preserve a certain kind of memory, certain aspects, and to show that even at the margin, this is, without ... financial support ..., we can do something. We can change some things” (*Anderson*).

Sandra: “Well, I don’t have any idea I am a person who has an enormous difficulty with regards to spatial relations.”

Me: “If you made a map, what would it be like?”

Not unlike the mental maps drawn by the undergraduate students, many of the interviewees only produced a sketch map to locate the region within the space of the state or the Brazilian Northeast. Vicente, for example, chose the “south-of-the-state” solution and positioned the region in the lower portion of the state outline:

For me to make a map of the Cariri here would be something very complex, because we would have to think in Ceará, the little state of Ceará, let’s think here, I don’t know how it would be here, and here in the central-south at this tip here, we would have all this Cariri (*Vicente*).

He recognized the region as a mentefact when he claimed that “nobody really knows exactly . . . I think nobody knows the limits of the Cariri.” However, when asked to define his Cariri, he considered almost all the 103 towns of the government-defined meso region (25 in Ceará, 18 in Pernambuco and 60 in Piauí) as part of the region (figure 6.4).



Figure 6.4 The meso region of the Araripe Plateau, showing the 103 towns included in the planning project and their administrative boundaries¹⁸⁶

¹⁸⁶ The map is a modified version of a sketch map available at <http://www.mi.gov.br/programas/programasregionais/araripe/abrangencia.asp>.

However in his own map he only included the towns in Ceará. The “details” of his map were a list of town names that are divided into three different administrative regions: Cariri East, Cariri Central and Cariri West (figure 6.5).

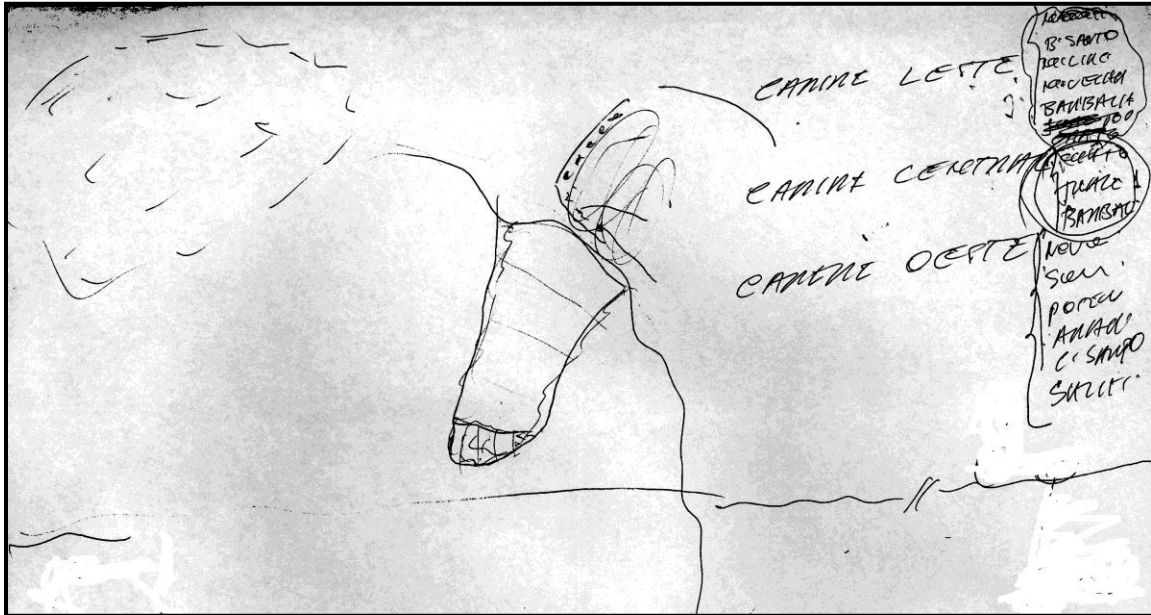


Figure 6.5 Vicente’s mental map of the Cariri

The Map as Discourse

The mental map can also serve as a map space to discuss different conceptions of the Cariri. When drawing his sketch map, Joaquim wove together different definitions. First, he felt a little bit uncomfortable about the exercise, drummed frequently with his pen on the table and denied his mapping skills (“I am bad at drawing,” “I don’t have a major ability to do this”).¹⁸⁷ His final map only confirmed the most general geographic statement: the Cariri region is located in the southern part of Ceará state. When I asked him for more details, he drew a zoom of the area without any place names and with a symbolic, but not real division of the municipalities (figure 6.6).

¹⁸⁷ Interview with Joaquim, June 08, 2009.

He made his comment on his map in the conditional tense: “The Cariri would be exactly this part here.” Joaquim was conscious about the fact that his map was a scribble on a sheet of paper rather than a “real” map. For him, if it were a map (and he thought that it was not), the region would be more or less in this position, or in his own words: “The drawing we have is of the extreme south of the state of Ceará, it would be here, more or less at this spot here. *We* draw a map of Ceará in this way” (*my emphasis*). The *we* is taken as common cartographic sense. A map of the Cariri is supposed to look like this. The discourse precedes the map that is only used to “illustrate” what the interviewee says. However, details such as place names and their location on the map that he mentions during our interview are only spotted with his pen, but not written down. His drawing served as a tool of “demonstration” in a literal sense: you can point to a place with your finger or pen, but you do not write these details on the sheet of paper as if it were a blank map.

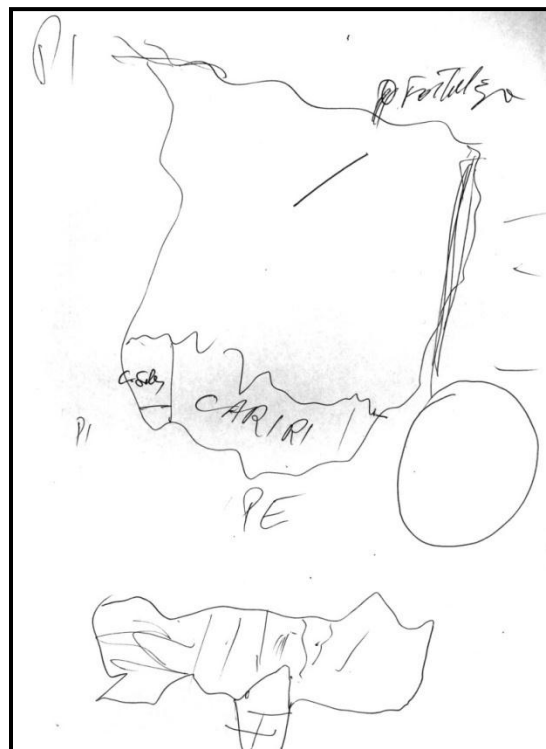


Figure 6.6 Joaquim’s mental map of the Cariri

Joaquim hid his own point of view behind generalized expressions that even obfuscated the fact that he himself was the author of the map: “There is dissent, there is no uniformity of thought of what should be the Cariri,” or in another passage: “There is no uniformity of thought. There is no official ‘thing’ of what should be the Cariri”. On the other hand he sympathized with the idea of defining the “triad Crato-Juazeiro-Barbalha” (i.e. the CRAJUBAR) as the heartland of the Cariri that also includes “the towns that have limits with these three municipalities.” Apart from his own opinion, Joaquim referred to the recent governmental initiatives to create a metropolitan region in the south of the state and concluded that political decisions to delimit the region would “reveal a definition.”¹⁸⁸

Joaquim’s map turned into a metaphor of the political scenario and the uneven distribution of political power in the state of Ceará that has always been concentrated in the state capital Fortaleza. He compared this situation to a popular figure, Pedro Cabeção (“Peter Big Head”), a macrocephalic beggar who walked through the streets of Crato several decades ago. For Joaquim, Pedro’s anatomy is a metaphor for the state of Ceará: “The head is Fortaleza, and the rest of the body has been forgotten” (*Joaquim*).

Mapmindedness and Map Biographies

During my research in the Cariri I asked myself the same nagging question: Where are the regional maps? Why is there a scarcity of cartographic material of the Cariri? One of the reasons is the limited circulation of the maps. They are frequently of restricted use or difficult access. Even the general topographic base map elaborated by SUDENE in the 1960s/70s (scale

¹⁸⁸ To underline this point of view, he shows me the official correspondence from a state representative who had proposed the creation of the metropolitan region to the state parliament. About a week after our interview the motion was officially approved and the metropolitan area was created.

1:100 000) is almost unknown in the region and can only be found in some of the official planning institutions.¹⁸⁹

Several interviewees mentioned a regional map made by the Diocese of Crato. One of them, Jandira, worked for the Catholic Church and remembered that they had a paper version of a map showing all the towns included in the diocese. More an emblem than a complex cartographic representation, the map was drawn without any administrative divisions. Straight lines irradiated from the diocesan seat in Crato and pointed to the centers of the surrounding municipalities. Clara critiqued that the map was not made by a geographer, but by a draftsman without geographic knowledge. It was simply enlarged and put into a frame: “It is only the municipalities. It’s the same when you pick the south of Ceará state and cut out only that part, you know” (*Clara*).¹⁹⁰

Only a few of my interviewees showed deeper interest in maps. Maps only seemed to attract when the interviewees were able to link them to their personal biography. Guilherme is an architect in his mid-40s who runs his office on the top floor of a four-story-building in downtown Crato. During our interview he produced two maps: a general schematic map showing the location of the Cariri in the south of the state, and a zoom of the region with a network of towns. Guilherme’s description of his first map (figure 6.7) is as follows:

¹⁸⁹For example, the map library at the regional university owned a complete collection of the topographic maps (at least three copies of each sheet) of the region. However, many maps have disappeared since many checked-out items have never been returned. The complete topographic series for Ceará has also been made freely available in PDF format on the internet for more than 10 years (<http://www.ipece.ce.gov.br/categoria5/base-2/base-1>).

¹⁹⁰ Recently, the Diocese of Crato has released a version of their map on the internet (http://www.diocesedecrato.org.br/mapa_diocese/mapa.php). Instead of indicating the (umbilical) connections between the central town of Crato, the clerical center of the region, and the other towns that belong to the diocese, the internet map shows a choropleth structure of the administrative units in the region with the division of the towns into five different ecclesiastic jurisdictions (*região forânea*) indicated by different colors. A mouse click on whatever town reveals an outline map of the respective municipality in a window on the left-hand side of the screen. Beneath the map, general details of the respective parish secretaries (name, address, etc.) are listed.

the Cariri would be this region here. Piauí, Paraíba here, here is Pernambuco, Piauí, Ceará, the plateau, and the Cariri here surrounding it, all this is part of it. And here are the borders to the other states (*Guilherme*).¹⁹¹

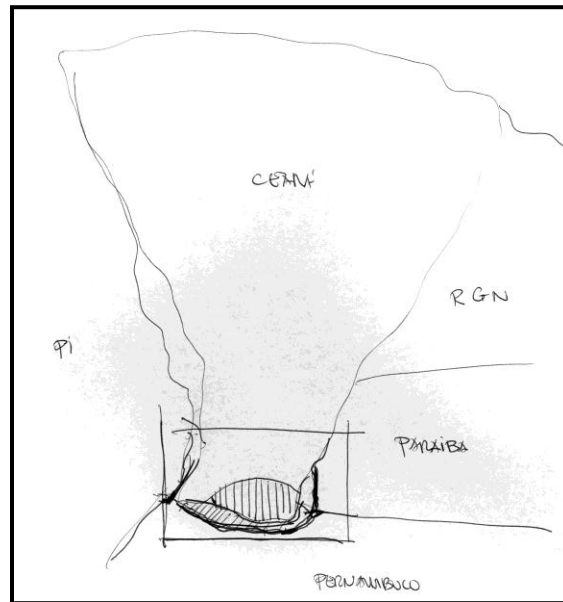


Figure 6.7 Guilherme's first mental map

With a road map in his mind, Guilherme initiated the drawing of his second, more regional map (figure 6.8) with Crato in the center, the place he was born. He created a network of places by adding connecting lines and rectangles with town names. When he reached Várzea Alegre further to the north, he suddenly stopped drawing and said: “I think this is not Cariri anymore.”

He was aware of the political, economic and cultural hegemony of the CRAJUBAR triangle that left all the other towns “paralyzed” and “polarized everything in the service sector”, while other towns were “atrophied” [held back]. For him, the CRAJUBAR was the core of the region despite political and administrative efforts to de-centralize it: “They have already created Cariri North, Cariri West, Cariri I-don’t-know-what, all these things, but for us who were born here in the region, it’s Crato, Juazeiro, Barbalha, the regular Cariri.”

¹⁹¹ Interview with Guilherme, June 12, 2009.

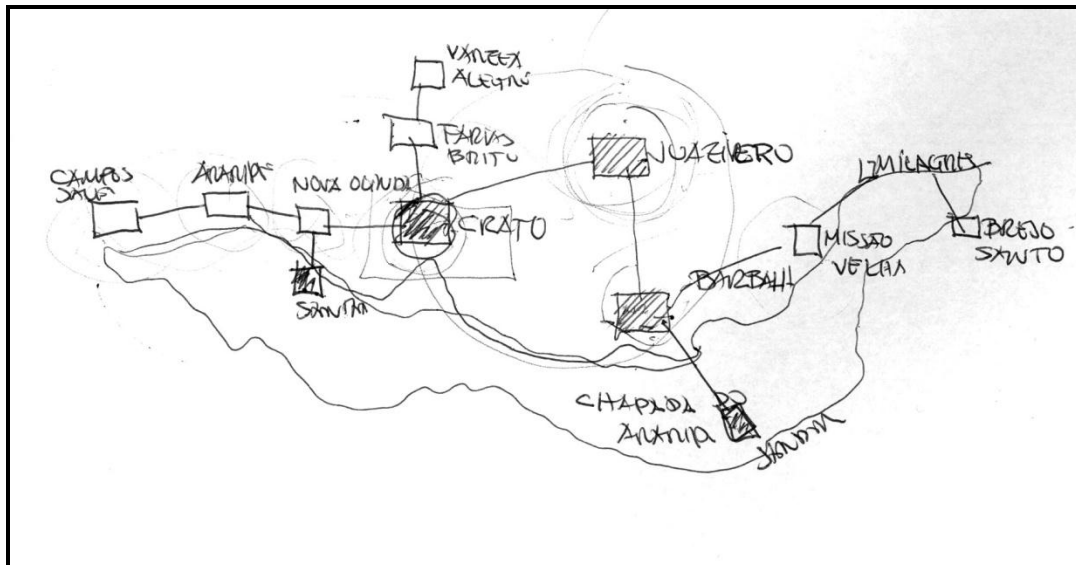


Figure 6.8 Guilherme's second mental map

Despite being a native of the region, he does not know much about the other towns in the backland, but affirms that “they have their importance. If they exist, I think they have an importance. But all the towns here in the regions have their importance.”

However, Guilherme's personal geography is different from the rather “dry cartography” of administrative boundaries that he presents in his mental maps. He had the opportunity to study architecture and civil engineering in the coastal capitals of Fortaleza and João Pessoa from the late 1970s to the mid 1980s and considered this absence from the region as a welcome escape:

It was the hope to have your horizons widened, to get known to the world, to grow (also culturally), to mature. And there was also the professional side. The choice of a profession that would give you a good salary. So we left town thinking about not returning anymore, because there was nothing that we could do here.

With all this cultural and intellectual experience outside the region, the Cariri for Guilherme seemed more like a friendly prison that did not offer the same cultural life he experienced in the cities where he studied: “This is not THE placeIn my case it was a desire to know other places and develop as a person there, because returning to Crato was a regression” (Guilherme laughs).

Miguel is another case of a mapminded person. He lives in a spacious house with high massive walls in the downtown area of one of the bigger towns in the region. His residence has a courtyard with many plants, trees, and birds. A hammock is spread out on the verandah, and many regional artifacts and paintings decorate the walls, among them several maps. During our conversation in his home, Miguel confessed his “map addiction”:

Now think about an old man crazy about maps! ... I am so crazy about this. When someone calls me on the telephone or sends me a letter from a certain place, the first thing I do is to look at the map. My house is full of atlases, on the walls and in frames: an atlas of the municipality, atlas of Ceará, atlas of Brazil, atlas of the Northeast and world atlas. And now, with the Soccer Confederation Cup, every day I look at the map, look at the cities that host those games.¹⁹²

A center piece in Miguel’s home is a map that shows the environmental protection area of the Araripe Plateau and that he received as a birthday present from “a friend of mine, an architect from Bahia, who knew of my map passion and sent it by plane.” In his own mental map of the Cariri he literally traced the ragged features of the plateau that he memorized from the original map (figure 6.9):

Here you can see what I told you. Here is Pernambuco. Here is that shell-like entry of Crato, there is Santana do Cariri. And there is the part of Piauí, Simões, and there it comes back again to Pernambuco. There is Exu, the home of Luiz Gonzaga [a popular regional musician] who was elected the Pernambuco citizen of the century.

For Miguel, this map is closely related to his personal biography for “it is a rich vein of personal history, and it gives a set of co-ordinates for the map of memory” (Harley, 1987, p.18). He reads the map as a meaningful text that helps him create images of past landscapes, events, and people that have been connected to his own life story:

¹⁹² Miguel refers to the FIFA Soccer Confederation Cup held in South Africa between June 14 and 28, 2009. Knowing about his map passion, I decided to send him a letter containing the transcription of our interview... and a road map of Louisiana.

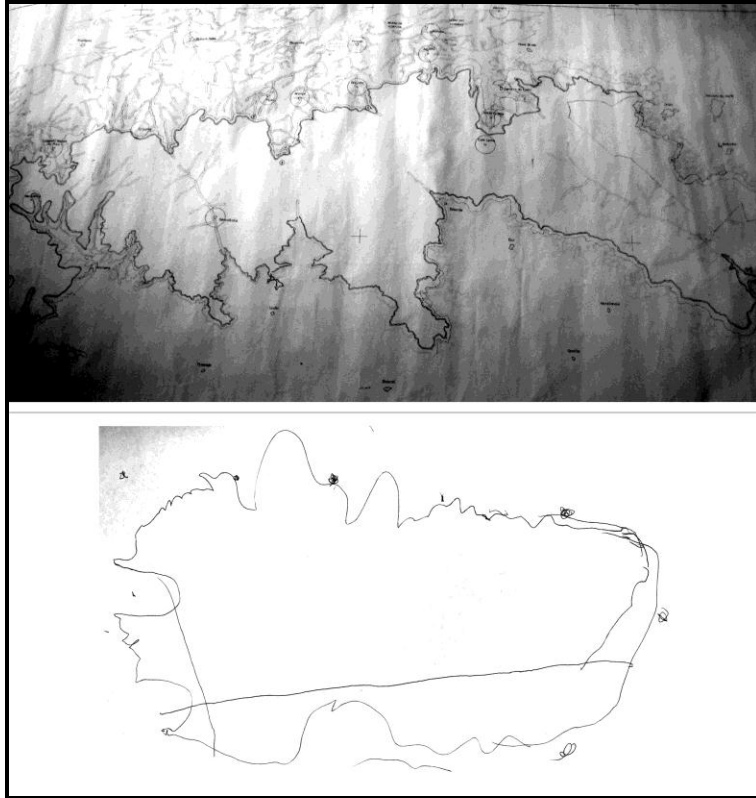


Figure 6.9: Comparison of official map and Miguel's mental map

This map of the Chapada, boy, I found it a beauty. I keep on looking, I feel, there are all the entrances [to the Araripe Plateau] in my head, memorized. So I confer with the map, the image on paper with the image I have kept riding on horseback with the cattle herders (*Miguel*).

After returning from my fieldwork in the Cariri region, I sent Miguel a letter asking him to provide me with further details of his map biography. I printed out three colored copies of parts of the topographical maps 1:100,000 of the region showing the vicinities of his birthplace and a copy of Luetzelburg's phytogeographic map of the Araripe Plateau that I have discussed in chapter 4 (figure 4.26). The data of Miguel's personal mapping changed according to map scale and content. On Luetzelburg's map he corrected typos and indicated the location of seven regionally relevant and inter-regionally important places and events that he enumerated on the sheet and for which he added a typewritten comment on the back of the paper. His observations were general descriptive statements about the places Miguel feels proud of, for example, the

town of Santana do Cariri “where you can find the Museum of Fossils of the Cariri, run by the regional university URCA, with petrified fish from 125 million years ago, visited by scientist from all over the world, especially from Holland and Germany.” The three copies of the topographic sheets contain more personal details. Miguel indicated the farm and sugar mill where he was born, the farm of close friends and a pond where he learned to swim when he was a boy.¹⁹³

Miguel’s passion for maps is not shared by many of my interviewees. Why is he an exception to the rule? Why are there so few “map addicts”¹⁹⁴ in the Cariri region? If the maps were easily available, would they be used? When I asked for the reasons why maps never have played an important role in the regional history and geography, some of the interviewees were quick to blame the colonizers for this failure. Anderson claimed that, different from the other nations (Dutch, Spanish, etc.), the Portuguese colonizers did not bring trained cartographers to measure the areas. For him, the Portuguese heritage seems like a conquest without space since “there wasn’t any concern with cartography.” In other words, “we were un-educated through the Portuguese culture that worked far more with this style of history, with essay writing and descriptions” (*Anderson*).

The first European settlers from Portugal claimed their lands, but did not register the exact boundaries of their properties: “There was no concern [with boundaries] because they happened to do the division among themselves” (*Vicente*). They divided the lands according to their fields of vision: “This is mine, and it is mine till the limit of I-don’t-know-who” (*Vicente*).

¹⁹³ Unfortunately, I was unable to discuss this map biography vis-à-vis with Miguel. When I prepared myself for the fieldwork, I considered using topographic maps as a discussion topic in my interviews. However, the copy of the map sheet SB-24-Y-D-III (Crato) I was planning to check out from the map library at the regional university had disappeared from its drawer.

¹⁹⁴ See Mike Parker’s (2010) personal account of an English map addict in which he describes his passion for maps that was triggered by shoplifted Ordnance Survey sheets.

As a result of this, history has ruled over geography, facts and dates over processes and spaces: “I think our culture is much more based on historical narratives. I think there is a lack of geographical foundation, even for the making of maps” (*Anderson*).

A View from the “Periphery”

In my search for “different” maps of the Cariri, I had to leave the town of Crato. On June 25, 2009, early in the morning, I decided to pick a van in Crato in order to pay a visit to Francisco whom one of my interviewees had indicated as a good informant. The half-hour ride took me to the top of the plateau. I got off in Nova Olinda where I waited for a beaten-up red Ford pick-up truck converted into a vehicle for passenger transport that would take me to Santana do Cariri. After 15 miles of potholes and bumps, I arrived in Santana where I hailed a mototaxi to take me to the district of Araporanga where, together with the mototaxiist, I spent ten more minutes to find the property of Francisco in a place commonly known as *Pé-de-Galinha*, a branched dirt road that resembled a chicken foot on the map.

I stepped through the entrance gate and headed to a stone tower built in a Portuguese medieval style. Passing through the arc, I could see a dirt footpath with hedges and flowers on both sides. On the right-hand side, there were five buildings constructed in different architectural styles: a Gaudi-like stone house, the reconstruction of a Greek temple, a replica of a house type found in the French Rhine area near Colmar, a Swiss chalet with its typical roof construction to the ground, and an English country house that was still under construction. On the left-hand side in an open grass field, a smaller red edifice was visible. It turned out to be a doghouse in concrete in the style of a British telephone booth. At the end of the path, behind the last house, I could see a 30-foot scale model of the Eiffel Tower (figure 6.10). I walked along the

path and met Francisco in the middle of the construction where we initiated our interview, accompanied by the noise of an electric saw and interrupted by the workers who asked Francisco for instructions.¹⁹⁵

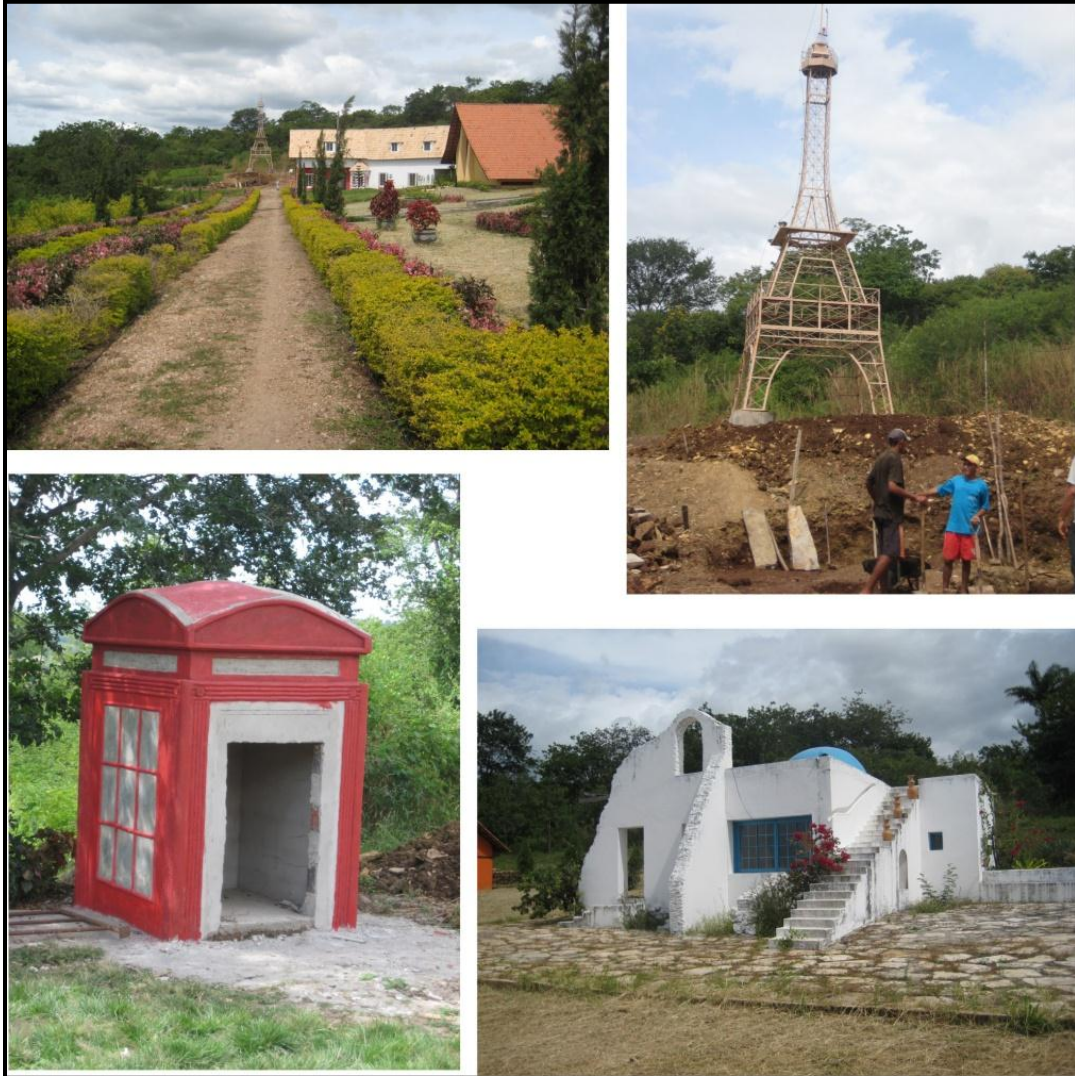


Figure 6.10: Impressions from Francisco's thematic architecture

Different from many other interviewees, Francisco defended an extremely local view of the region. In his mental map, he intentionally left out “obligatory” places such as Crato and Juazeiro do Norte on purpose (figure 6.11). He sketched out an undefined shape and only

¹⁹⁵ Interview with Francisco, June 25, 2009.

included the names of three towns and the place where he lived (Santana misspelled as *Santan*) in the western part of the Cariri. The top of the map pointed to the east. When he finished his drawing, Francisco exclaimed: “This is our Cariri. It is the hard-sole Cariri¹⁹⁶, our Cariri here is rustic. There is no abundance here, but there isn’t any extreme poverty, either, and one is able to survive here.”

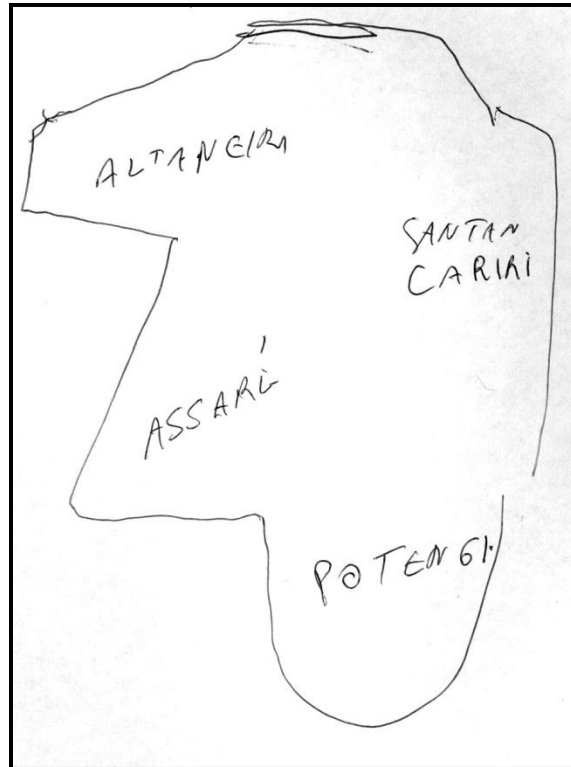


Figure 6.11: Francisco’s mental map of the Cariri

His map turned into a personal discourse. Francisco used his sketch map to show his cultural resistance to the hegemony of the CRAJUBAR area to a non-native interviewer rather than to represent the geography and cartography of the Cariri. He affirmed that his vision of the Cariri is community-centered and emphasizes the locale where he lives. Even Santana do Cariri, the administrative center of the municipality about six miles away, did not attract him:

¹⁹⁶ *Pé-duro* in Portuguese meaning tough or hard foot. Francisco refers to the poorer conditions in the backlands where people still walk barefoot because they do not have any shoes. As a result of this, the foot soles develop a tougher skin.

For me, the Cariri is the western Cariri. Here is my territory; here I am limited to the borders of my municipality. Here, on the other side, is Farias Brito, which I do not consider ours. Here you come to Altaneira, and I would say that Altaneira is my Cariri. Assaré is my Cariri (...). And Santana do Cariri. Santana do Cariri, in my deepest understanding, is a foreign place to me. When I go to Crato, I feel like someone who visits a neighboring country. Because you see, here is Exu, and that is already the end of the world for me, and it is only 40 minutes from here. I have an internal barrier so that I would have to prepare myself for this trip. After all, I am going to Pernambuco and Exu.

During our conversation I was unable to turn away my eyes from the architectural monuments on his property. I did not understand José's combination of local patriotism and European cosmopolitanism. Why did he create this thematic park of European architecture? Francisco's answers did not give a straightforward explanation. He only traveled to Europe three times, but his older brother had been living in Paris for decades. For him, the Eiffel tower was a remembrance of his childhood (when he saw a replica in a music shop in Fortaleza and started to dream about foreign places) rather than a spatial reference. Francisco considered himself a consumer of images and facts with a photographic memory and did not feel any attraction when he visited a place for a second time. Even Paris and the Eiffel Tower became boring to him when revisited:

Because I arrive in a place and it is as if I am missing the opportunity to go anywhere else. That place I already do know. Coming again to the Eiffel tower, not by a long shot, not even in the slightest way, does it give me the sensation I felt the first time.

Francisco felt a certain kind of restlessness and wanted to be in places he had not been, yet. His architectural project was both an attempt to gather the family (each sibling selected a country) and to display cosmopolitanism. At the same time, the different house types stand for each country's virtue. For example, he associated the United Kingdom with a "high degree of civilization" and Switzerland with a well-executed organization. While the façades and some parts of the interiors (e.g. the English fireplace) are true reconstructions of the original structures

that he considered postcards, other parts were functionally adapted to the regional climate. Francisco's iconography of landscape seems to be a manifestation of his own irony. Foreign styles and exotic icons attract more than regional treasures and landscapes. The constructions allure the villagers who almost turn their visit into a pilgrimage, although, in Francisco's own words,

they do not capture absolutely nothing from the world, even watching TV and seeing everything. This is something, for someone who does not have a [developed] culture, this is something really serious.... And when they come here, they simply find everything beautiful. It's different. You see, they find it beautiful, different, but they like it. Any person from São Paulo, any visitor they receive here, there are 9, 10, 15 people, taking photos, even don't ask for permission, and then go everywhere. Sometimes they enter my house and wake me up there from my bed on the second floor. And I do not restrain them. It's because if they find it interesting, this would already be a justification for what we do here.

I decided to add Francisco to my list because of his background. Different from the other interviewees who were born or at least have lived in the CRAJUBAR for a long time, Francisco had a different trajectory in life (backland-capital-backland, with contacts and interest in Europe) that helped him create his own idea of the region. His map is a form of protest or provocation and an invitation to look at the "other" Cariris rather than a regionalist manifesto.

Invisible Maps¹⁹⁷

When Denis Cosgrove (1999) mulled over mappings in cultural geography he stated that this "measurement" does not have to be purely mathematical and geometric, but can also be spiritual. Felisberto, one of my interviewees, presented an example of a different Cariri and showed that a map does not have to be concrete and accurate. The map he drew did not contain

¹⁹⁷ The title of this sub-header is an allusion to Gunnar Olsson' playful and provocative philosophical musings on the semiotic and geometric reasoning of the human beings and the "invisible maps" that guide them (Olsson, 1991).

any place names. His drawing in portrait format was an abstract sketch of the Araripe Plateau (figure 6.12). The map space was too small for his outline of the tablelands, but this did not matter to him.

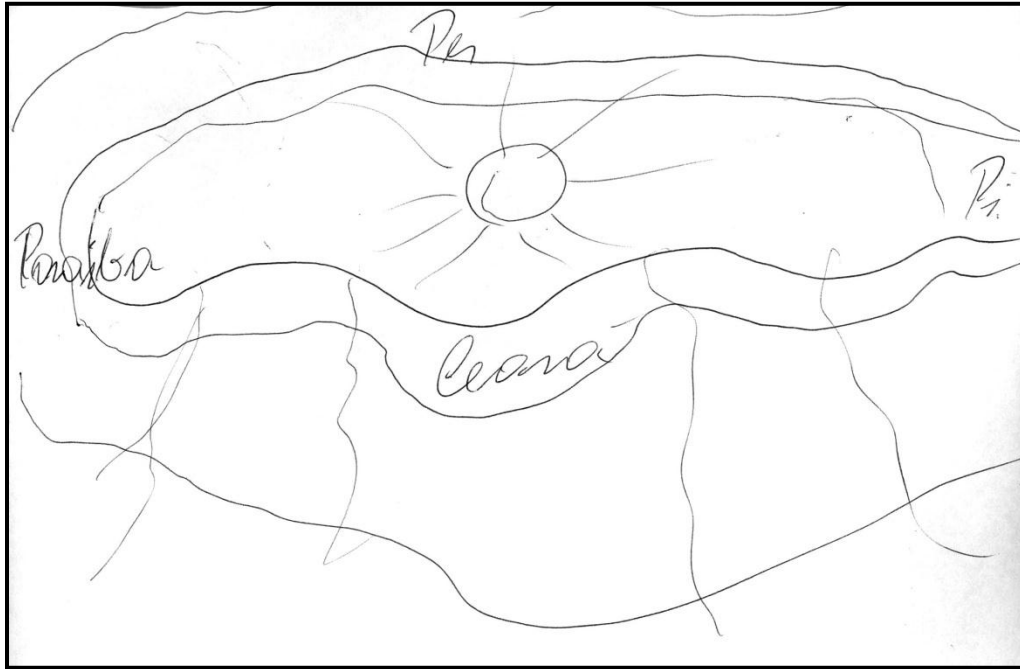


Figure 6.12: Felisberto's mental map of the Cariri

He simulated the “entries,” ravines and runoff river beds from the top, but admitted that the ideas in his head were difficult to transfer to a sheet of paper. He drew an energetic core (a sun symbol) to represent the “radiating center” in the middle of the plateau and explained: “The more intense Cariri would be this area around here that serves, ... resembles an aura”. According to his worldview, there is no exact locality for the center point:

I suppose that it is in the forest, the densest part of it. You understand? From that point on, it's a place, if you walk through the middle of it [the forest], you will feel it.... In some regions where I walk I can feel it [the center of energy]. I feel that very strong energy and calm down here, you understand, it recharges me. But this is something very intimate.

Place names and other locations were not relevant for his cosmic philosophy, although he mentioned at least 8 place names that were under immediate influence of this energy. The

vertical lines symbolized the “water fountains that gush from the Araripe Plateau, they would be like the veins of the Cariri, where those ... flow. I don’t know, I am very abstract here.”¹⁹⁸ The Cariri literally turns into a *geobody*:¹⁹⁹

I define the Cariri like this. To be true, a living being, as it is the land itself, a living being, which is also a living being, maybe a cell of the plateau, of the land ... I identify myself more, because I live together with it.

However, Felisberto’s strongest form of expression was his music. During our interview he sang three songs by the local artist Abidoral Jamacaru that referred to the region. The song “Singing the Cariri to sleep” (*Para ninar o Cariri*) produced powerful images of nature and provided a list of regional fauna and flora:

The sun gilds the green hilltop
Of the Araripe Plateau
Drowsily the afternoon falls
Night comes in to lull the Cariri.
The sugarcane field sleeps
Quince tree, pequi grove
And the palm trees of the babaçu coconut
Color, bright king vulture, purple-throated Euphonia, penelope bird, handsome caboclo²⁰⁰
Yellow-legged Tinamou, crickets, bush anoles, raccoons, columbina
Rattlesnake, maned wolf already going to sleep
The chameleon rests
Butterfly, hawk
The *malisal* plant closes its leaf
Sleep in peace, child and old man.”²⁰¹

Felisberto’s strategy to map and visualize the Cariri through songs were an inspiration for me to search for different cartographies of the region - maps and mappings that Woodward and

¹⁹⁸ A historical example is the map production of the eighteenth-century English cartographer and geologist Christopher Packe who represented rivers and brooks in his topographic maps of South England as if they were blood vessels in a human body (Charlesworth, 1999).

¹⁹⁹ My use is different from Winichakul’s (1994) definition of the term *geobody* that refers to the constitution of nationhood. In my study, I use the term in the sense of embodied space and performance. Body and representation help create a spiritual map, not so different from the mandalas in the Buddhist tradition (Walcott, 2006).

²⁰⁰ General term for the Brazilian peasant population of mixed origins.

²⁰¹ Song lyrics reprinted with the permission of the artist.

Lewis (1998) classify as “performance cartography” or “processes and objects that realize or externalize the internal experience” and that entail nonmaterial and ephemeral aspects such as gestures, rituals, songs, poems, dance, and speech. This kind of cartography does not result in maps, but must be seen in a broader sense: cultural manifestations from which we can extract ideas, images and texts of space and place.

Another example for these “invisible “maps” is the regional poetry. Two of my interviewees, Fernando and Hermano, are members of the *Academia dos Cordelistas do Crato* (“String Literature Academy of Crato”), a group of persons interested in writing popular and poetized “stories on a string” (Slater, 1982), i.e. low-cost booklet pamphlets, generally with a woodcut print on the cover, that deal with everyday situations, moral issues, politics, and popular culture (figure 6.13).



Figure 6.13: Display of “stories on a string” in Crato (photo by author)

In my conversation with both authors I tried to find out about any “hidden cartographies” in their words and images. As for Hermano, he does not only craft poems, but also produces

woodcuts for the covers of the booklets. However, regional landscapes rarely figure as the front page since “in xylography, making place is very difficult.” Carving the textures of soils, mountains and vegetation require a sophisticated technique so that the artist generally is obliged to create fictitious landscapes that are simplified stereotypes of northeastern Brazil:

Working with woodcuts here in the northeast created its stigma. The landscape [that is carved] is a landscape of the wild backlands. There’s got to be a cactus, a tree without leaves and all, and consequently there is a preference for poverty, for the draught and so on (*Hermano*).

In 2001, Hermano carved a woodcut for a string story on the importance of environmental preservation on the Araripe Plateau that was produced for a thematic issue for the academy (figure 6.14).

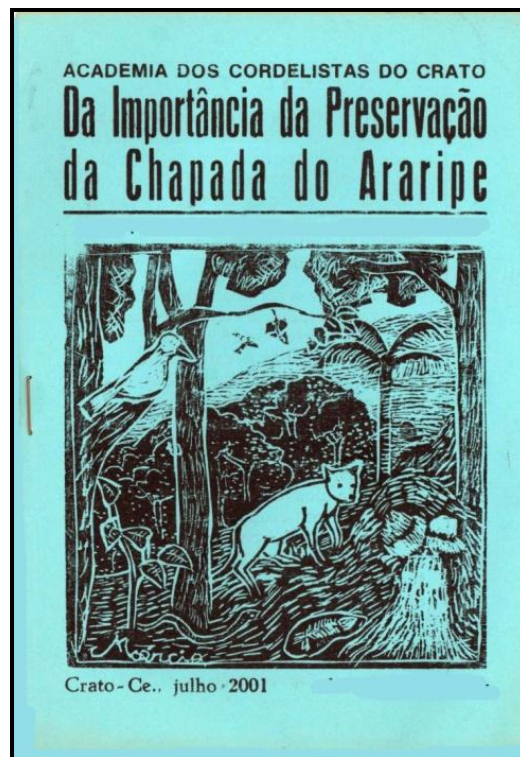


Figure 6.14: Cover of string literature pamphlet (written by by Fernando, woodcut by Hermano)²⁰²

²⁰² Used with permission by the authors of the string literature.

The drawing hints at the national forest (including a palm tree) and the unique fauna (including the testimonies of the Mesozoic Era, the petrified fish). Fernando figures as the author of the poem. On 8 pages and in 32 stanzas, he praises the landscapes, animal and plant lives of the plateau. Once again, the metaphoric power of the tablelands is underlined:

It is the Araripe Plateau
That immense wall
That amazes our souls
And enchants our vision
It forms a beautiful curtain
That separates our State
From my Pernambuco, its brother.

Apart from the poems and wood carvings, there are other powerful forms of expressing regional culture and geography. During our interview, Teresa taught me a lesson on regional myths, creeds and apparitions in the Cariri that helped to construct an imaginary cartography. The most striking story was about *Dona Toinha* who told her that on Good Friday a river below the Araripe Plateau emerged and passed noisily under her house. In her story, the stones of the king and an enchanted castle appeared that she located geographically: the “bed” of the castle was in Nova Olinda and the lagoon in the town of Araripe, while the two castle towers could be found in São José do Belmonte in Pernambuco. Teresa affirmed that Dona Toinha created a kind of map that indicated where the waters flowed, “and the map is like this: something that she sees, the big rocks, there are many rocks at her house”. This story merged different legends (a mix of medieval Portuguese mysticism and indigenous mythology) that opened space for invisible cartographies:

It is very much [water], there is an immense river under the Araripe Plateau. Well, she didn't tell me where it comes from or where it flows to, but she said that it passes near her house, under her house, incredible water masses. And I believe it. And she feels the vibrations on the ground, all this She links all this geographic stuff to history, with the profane and the religious (*Teresa*).

The “maps” I presented in this sub-section are not necessarily cartographic representations, but spatial (hi)stories of real landscapes, mythical places, or popular culture. In a broader sense, they are metaphorical that communicate events, processes, and worldviews without explicitly referring to space.²⁰³

Mapping Confusion

How do I myself react to all these mappings? Finally, I got caught in the web of my own mappings.²⁰⁴ As an educator in cartography, I kept on orienting my maps according to the north-on-the-top rule. However, many mental maps of the Cariri were “upside down” representing the horizon of the Araripe Plateau as their top. In the case of Clara’s mental map (figure 6.15), the original drawing only contained three abbreviated place names (C.S. = Campos Sales, C = Crato, B.S. = Brejo Santo) encircled in their own areas of influence.

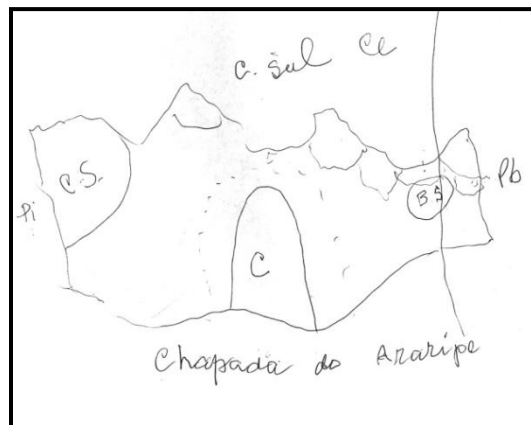


Figure 6.15: Clara’s mental map of the Cariri

²⁰³ Maybe this conception of maps and mappings could be a starting point to discuss the non-representational aspects in cartography and cultural geography.

²⁰⁴ My use of the term “web” is an allusion to Clifford Geertz’s idea of web of meaning (Geertz, 1973). For him, the anthropologist may get caught in his/her own web of meanings. In my case, I ended up entangled in my own cultural-cartographic mappings:

Believing, with Max Weber, that man is an animal suspended in webs of significance he himself has spun, I take culture [mapping] to be those webs, and the analysis of it to be therefore not an experimental science in search of law but an interpretive one in search of meaning” (Geertz, 1973, p.5).

Clara commented that in her map she could only see the CRAJUBAR metropolitan area and the two strategic towns (Campos Sales and Brejo Santo) in the west and east. She indicated the other places (“satellites”) by symbolically drawing some municipal limits and touching the map surface with her pen. I looked at the map and literally lost my orientation:

Me: You know, I find this curious. Of course, I am not a fan of cartographic conventions, but I find it interesting that you... where is the north in your map?

Clara (points to the top): Here.

Me [several seconds of silence]: Are you sure?

Clara: Yes, isn't it the south of Ceará?

Me: Yes, it's the south of Ceará, but it is north from the plateau....

Clara [several seconds of silence, then she laughs]: Wait a minute. It is north from the plateau....

Me: In reality, when you look...

Clara: When you look from the side of the plateau, that's one thing. When you...

Me: For example, on the topographic map, it would be the opposite

Clara: It would be the opposite on the topographic map?

Me: Isn't it? For example, when you look at the topographic sheet, when you look at the topographic map, here you've got the CRAJUBAR, you see, here is Brejo Santo.

Clara: ... and there is Campos Sales

During our talk, Clara added two tags to her map: C.Sul CE and Chapada do Araripe to indicate the positions of the central-south of the state and the plateau in the state. I am not sure why her map left me disoriented. Maybe it was because my exposure to the hundreds of mental maps drawn by the undergraduate students (chapter 5) which did not necessarily have the geographic north at the top. I cannot explain why I began to mistake an undeniable cardinal direction (geographic north) for a relative position (the Cariri region in the south of the state but in the north of the Araripe Plateau). I started to draw my own mental map of the region (figure. 6.16) in order to locate myself again in space. Even so, I still did not understand Clara's (correct) drawing:

Me [begins to draw his own map]: Excuse me, Campos Sales is here and here is Brejo Santo, here is the plateau. That's on the topographic map. It is in this map

of Ceará that people do it, the south of Ceará, Campos Sales, Brejo Santo here. So the geographic north is in this direction. And you... you don't do it this way.

Clara: No, I did it this way.

Me: You did it this way?

Clara: This way.

Me: Yes, this way, OK. Here is...

Clara: Here would be the CRAJUBAR, Campos Sales and Brejo Santo

Me: And the plateau is...

Clara: The plateau is here.

Me: That's here, but in which direction?

Clara: No, it will go in this direction here, which is east-west.

Me: Now I am getting confused [laughing].

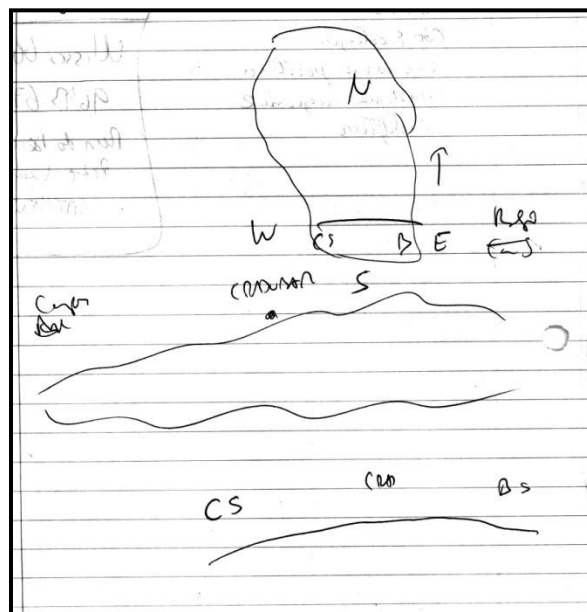


Figure 6.16: My own attempt to geo-reference the Cariri

Perceiving my confusion in disbelief (it was me who had been teaching cartography for more than a decade), Clara tried to explain the map to me by describing the locations of different places to me. After a while, our conversations faded out into a consensual “hm”, hers in astonishment, mine in complete embarrassment:

Clara: Because the plateau is here, look, it goes this way.

Me: Because Brejo Santo is to the east.

Clara: But isn't this the east?

Me: If this here were the north, it would be the west.

Clara: Let me see the map.

Me: Here you see it, the west, east, north, south, Brejo Santo is here.

Clara: That's it.

Me: So the CRAJUBAR is...

Clara: Brejo Santo is in the east.

Me: Hm.

Clara: East.

Me: OK.

Clara: In the south or in the north of the plateau.... This means, Crato and the Cariri are north from the plateau.

Me: Yes, north from the plateau. So the plateau is more or less around this place here?

Clara: It's down here.

Me: Down here?

Clara: Hm.

Me: Hm.

I learned from this experience that in the maps of our minds the absolute truth of the cardinal directions could be turned upside down. The resulting map is not necessarily wrong, as long as it fulfills its purpose which I did not accomplish very well in my case.²⁰⁵

Maps of Meaning

My interviewees produced a variety of different mental maps of the Cariri ranging from rather official reproductions and simple location maps to spiritual cartographies of the Araripe Plateau. In many cases, the maps were insufficient to express what the interviewees had to say about the region and their own place-boundedness within the Cariri. In the pages above I have briefly commented on some of the drawings the interviewees produced. However, the maps turned out to be an underachieving tool to discuss regional histories and geographies since the idea of the Cariri region in the geographical imagination does not correspond to the concept of region as an area with fixed boundaries. Without a well-defined “spatial frame” in the form of drawn (out)lines that would give a shape to the Cariri and define which places are inside our

²⁰⁵ By coincidence, my interview with Clara was the last one before a planned one-week break from my fieldwork during which I took part in the Sixth Colloquium on Cartography for Children and Students in Juíz de Fora in Southeast Brazil – enough time to readjust my sense of orientation.

outside, the region remained abstract and amorphous. The drawing of the mental map depended on each individual's creativity, imagination, and decisions.

One of my main concerns in this chapter was the question of how to bring the Cariri back on the map. How could the rich history and geography of the region be linked to cartography? Some of the interviewees suggested possible solutions to this problem. Vicente proposed a kind of rescue history²⁰⁶, “not only informing our functional relationships with ‘things’ but rescuing new realms of meaning from the fragmentary and the ephemeral.” For him, maps could grow out of the memory of the population:

Listening to the population in the surroundings of the tablelands. We have to rescue history first. And we don't have much history here, no. (...) Today it's different. In order to assemble and make this map, we need a different type of data.... How to do it? Listening to the persons, the elders, and pick the existing material so that we can filter (*Vicente*).

However, making a regional map is more than just listening. It also includes physical contact with the landscape that connects the memory and knowledge to the real space.

Another interviewee critiqued the local parochialism that prevents the habitants of one town from visiting other places in the region. Mapmaking remains difficult, “because [people] do not walk around in the Cariri. They do not travel from here. So they do not visualize”. In other words, you must walk your maps” (*Wellington*).²⁰⁷

This chapter aimed to establish a dialogue between word and image, between regional ideas and regional representations. However, many of the mental maps remained a by-product of the conversation. In my interviews the maps were not the principal channel of

²⁰⁶ Vicente's observations echo Lorimer & MacDonald's (2002) plea for a “rescue archeology” that aims to restore our interest in objects and artifacts. See also Pearce & Hermann's (2010) restorative techniques for historical cartography.

²⁰⁷ See my own attempt in the following chapter.

expressing the interviewees' knowledge of the region. They were only incomplete and imperfect representations of reality. Or in Arlene do Araripe's words,

I don't know. I made a drawing, so for me it is only a bit, for me this is infinite, you see. It goes on, here it goes on. It was not possible to portray because I don't know... from a cartographic point of view it had to be more, but it is an image that I have.

Different from the previous chapter, I was able to gain further insights into the cultures of mapmaking and mapping in the Cariri. However, the mental maps drawn on the paper did only correspond to a very small part of what the interviewees keep in their mind. They served to show how each mapmaker situated himself/herself in the region rather than how they would draw a map containing their regional knowledge.²⁰⁸

So what are these mental maps good for when topographic maps could provide a more detailed picture of regional reality? Tim Ingold (2008) argues that modern cartographic maps overemphasize the (de)limitation of space expressed through different line features such as railways, roads, telegraph lines, or rivers:

Such maps always have borders separating the space inside, which is part of the map, from the space outside, which is not. Of course there are many lines on the map, representing such things as roads and railways, as well as administrative boundaries. *But these lines, drawn across the surface of the cartographic map, signify occupation, not habitation* (Ingold, 2008, p.85, my emphasis).

It is the act of using a map that establishes the connection between space and its representations and helps the map reader and mapmaker to find himself or herself on the map. Map use should not be restricted to the "look at maps", but also means engagement with what is

²⁰⁸ In her dissertation on whiteness and memory of place in a historically black community in Virginia, Mieka Brand (2006) centered an entire chapter on a community map drawn by an old white man. The map turned out to be a map of a memory of place rather than a map of place. The mapmaker deliberately omitted any spatial reference that could indicate the presence of the black population.

represented on the piece of paper by scribbling on the map, following lines, marking places, and initiating a conversation:

To draw on a sketch map is merely to add the trace of one further gesture to the traces of previous ones. Such a map may be the conversational product of many hands, in which participants take turns to add lines as they describe their various journeys. The map grows line by line as the conversation proceeds, and there is no point at which it can ever be said to be truly complete (Ingold, 2008, p.85).

This said, I maybe did not go far enough with my mapping interviews because I was not able to make my interviewees feel included in their maps. But how could I achieve this aim? I decided to call to task my own skills as a mapmaker and mapper “to add lines” which will be the topic of the next chapter.

Chapter Seven: Mapmaking Between Narrative Cartographies and Cartographic Narratives

“Pray, sir”, said the housekeeper, “are there no knights in his majesty’s court?”
“Yes, many,” replied Don Quixote; “and highly necessary they are to keep up the state and dignity of princes.”

“Would it not, then, be better,” replied she, “that your worship should be one of them, so that you might quietly serve your king and lord at court?”

“Look you, friend,” answered Don Quixote, “all knights cannot be courtiers, neither can, nor ought, all courtiers to be knights-errant. There must be some of every station in the world, and though we are all knights, there is a great difference between us; for the courtier-knight traverses the globe only on a map, without expense or fatigue, suffering neither heat nor cold, hunger nor thirst; whereas the true knight-errant, exposed to all the vicissitudes of the atmosphere, by night and by day, on foot and on horseback, explores every quarter of the habitable world”

(Miguel Cervantes Saavedra - Don Quixote, 1869 [1605], p.312).

What is the relation of mapmakers to the space they map? How do they engage with their object of study? Don Quixote’s observation on courtiers and knights-errant makes a good parable for mapmakers and mapmaking. Cervantes juxtaposes the place-bound noblemen who reside at the royal court to the medieval chivalric adventurers who wander around in the world in search of situations in which they could prove that they are worthy knights. Whereas the former know the world through the “view from above” on paper maps that provide them with all the knowledge they need, the latter rove spaces, places, and landscapes and make their movements a direct, physical experience. Similar to the geographer in Saint-Exupéry’s *Little Prince* (1943), courtiers, mapmakers, and geographers are seen as armchair professionals who stay at home, since “it is not the geographer who goes out to count the towns, the rivers, the mountains, the seas, the oceans, and the deserts. The geographer is much too important to go loafing about. He does not leave his desk” (Saint-Exupéry, 1943, p.52-53). Opposite to this, travelers, explorers, and adventurers supply the mapmakers with the necessary information, but they are not

considered official cartographers. There is a tension between the processes of gathering and representing data, and between the fieldworker and the “armchair cartographer.”

My argument in this chapter is that mapmaking from a cultural-geographic (and a cultural-cartographic) perspective must be an active process that requires the cartographic engagement and involvement of the “mapper.” Behind the apparently static appearance of maps loom movements and actions that turn them into “mobile subjects, infused with meaning through contested, complex, intertextual, and interrelated sets of socio-spatial practices” (Del Casino Jr. & Hanna, 2006, p.36). For this purpose, Del Casino Jr. and Hannah (2006) propose a methodology beyond the binaries of representation/practice, production/consumption, conceptualization/interpretation in cartography. In order to corroborate their point, they present an empirical example (a tourist map of Fredricksburg, Virginia) in which they point out that “maps and mappings are both representations and practices (read: performances) simultaneously. Neither is fully inscribed with meaning as representations nor fully acted out as practices (p.36).”²⁰⁹

In this chapter I will go beyond Del Casino Jr. & Hanna’s (2006) suggestions and not only deal with the “impacts” of the map, but also of the processes of mapmaking on the mapmakers and readers. On the following pages I will present two mapping and mapmaking strategies and apply them to my “open-air laboratory” in the Cariri region: making maps and other visual representations based on the accounts of others and performing my own cartographies based on my direct observations of the landscape “on the move”.

²⁰⁹ Del Casino Jr. & Hannah (2006) coin the term “map space” to indicate the connectedness of representation and performance.

Mapping the Cariri Region

How can this cartographic mix of representation and performance be practiced in the Cariri region? For Richard Francaviglia (2005), in his case study of the Great Basin in the United States, this is a matter of connecting sensual place experience with mapping by establishing an affective link between the representation of places and the places to be represented:

Is mapping a place in greater and greater detail actually synonymous with really knowing or understanding it? Here, in the middle of the Great Basin, I conclude that it isn't: Here, with the place itself spread – the erratic motion out before me and its features depicted on maps, I realize that enhanced mapping should never be confused with complete knowledge. Until we can map all the other aspects that make up this magnificent place – the erratic motion of a dust devil moving across a playa, the pungent smell of sagebrush wafting on a cool breeze after a rain shower, the sizzling feel of chocolate-colored basalt under a Great Basin summer sun – imagination will always be one step ahead of, and yet will always inspire, mapmaking (Francaviglia, 2005, p. 186).

The essence of Francaviglia's observation above is that maps contribute to knowledge, but that they remain incomplete without being linked to the real places "out there". Mapping turns into a sensual experience. In other words,

People's bodily practices of walking, driving, touching, smelling, and gazing, as well as their understandings of landscapes and places can be guided and informed by maps and by the innumerable intertextual and experiential references always present in any map (Del Casino Jr. & Hanna, 2006, p.44).

The theoretical introduction above was necessary to explain the aims of this chapter. Something is bothering me in this discussion on mappings. As a researcher, I study historical and present-day maps of the Cariri, ask people from the region to draw their own mental maps, and tease out cartographic details through interviews. I have only been leading with maps and mappings by *others*, but not with my own attempts. In his manual of mapmaking for the humanities, Mark Monmonier (1993) laments this lack of "mapmindedness" in academia in an almost admonishing tone:

Most academic researchers – even some geographers, sad to say – know little about making maps. Most undergraduate courses fail to address, much less advocate, the possibilities of employing graphics to explain spatial concepts, and anthropologists, historians, and others who could make frequent and effective use of maps rarely study cartography. Graduate programs in the humanities and social sciences ignore map making as an analytical and expository skill. Indeed, graduate training and disciplinary tradition have treated map making as a service that one buys, rather than as a potentially important part of the scholar’s creative work (Monmonier, 1993, p.8).

My interpretations in the previous three chapters left me in the background – passive, almost objective, a cartographic gaze by the omniscient observer. Where are my own maps of the Cariri region? How can I map the region? In the first place, mapping means engagement and active involvement in the space or place of study. In order to establish connections between places and their representations, the mapmaker must be a mediator. In other words,

Drawing a map therefore *involves* the subject (self), making mapping a personal, reflective experience. As a result, the map is a ‘map’ of experiences, and of course can be read as such. Its materiality, its texture and feel, is a critical part of the map’s ability to provoke dialogue, and as a result, in turn, that dialogue becomes imprinted on the map (Lilley, 2000, p.373, emphasis in original).

In this context, Margaret Pearce (2008; also Pearce & Hermann, 2008, 2010) presents a methodological strategy to cartographically depict “spaces shaped by experience” (p.17), taking as an example the travel accounts of an eighteenth century fur trader in the Upper Great Lakes. In her study, she converts narratives into cartographic frames with quotations that can be read like a graphic novel.²¹⁰

I will use two different approaches to initiate my cartographic dialogue with the Cariri. First I will produce *narrative cartographies* that are based on one of the most detailed sources of

²¹⁰ For a visual example see Han (2008) who has gone beyond graphic framing by translating her dissertation on evangelical missionaries in South Korea into a 24-page graphic novel. The result is not a simple illustration to the written text, but a “play with successive images and their productive co-existence with words” (p.58). Han affirms that “[i]n a way, my interest in comics had less to do with drawing as it did with visual storytelling. Like maps, comics simplify a complex three-dimensional reality into a more manageable version” (p.58).

travel writing about the region, the personal diaries of Francisco Freire Alemão, a nineteenth-century Brazilian botanist and the leader of the *Comissão Científica de Exploração*, the first Brazilian scientific expedition to the country's backlands that spent three months in the Cariri between December 1859 and March 1860 (see chapter 2). Freire Alemão's observations on people, landscapes, and culture will represent the raw material that I will use to translate and convert words into (carto)graphic forms and "frames" in a creative way (Pearce, 2008; Pearce & Hermann, 2008).

The second strategy refers to my own personal cartographic experience and how I insert this into the *narrative cartographies* of the first approach. I will follow Freire Alemão's trajectories and compare his observations and doings to my own. These *cartographic narratives* emphasize the mapmaker and his/her conflicts and turn the research into a performance cartography which represents a shift "from considering texts as the bearers of culture, toward performative ways of knowing the world," "[a] philosophical shift away from representation toward action"(Perkins, 2009, p.126), and a process by which human feelings are charted onto a cartographic landscape (p.130).

Narrative Cartographies

In 1858, the *Instituto Histórico Geográfico Brasileiro* (IHGB) selected its member Francisco Freire Alemão (1797-1874) as the leader of a commission to explore the unknown backlands in the Northeast of the Brazilian Empire. Freire Alemão (figure 7.1) was a renowned botanist who received his professional training as a physician-surgeon in Rio de Janeiro and Paris, then became a professor of medical botany and zoology in the imperial capital. During his

intensive scientific career, he described at least 15 plant species and 45 genera (Morais, 2005, p.72).



Figure 7.1: Portrait of Francisco Freire Alemão (Damasceno & Cunha, 1961)²¹¹

The scientific commission arrived in the state capital Fortaleza in February 1859 in order to make the preparations for their trip to the *sertão*. According to his biographers (Damasceno & Cunha, 1961), Freire Alemão was a disciplined, enthusiastic, and dutiful professional and scholar of the Brazilian flora:

Since his arrival in Fortaleza, the old master exercises all his capacity of work. He studies plants, makes sociological observations, investigates, annotates, transcending, through his scrutinizing spirit by nature, the field that was reserved for him. Meticulous, methodical, he continues in his habit to study and work daily. Thanks to this professional honesty, the efficiency of the botanical section was incomparably greater than that of the others (Damasceno & Cunha, 1961, p.26).

After more than six months in Fortaleza during which the scientists waited for their equipment, the sections of zoology and botany, including Freire Alemão, began their collecting trips into the backlands of the Northeast. Figure 7.2 shows the approximate itineraries of Freire Alemão through Ceará. He travelled to the *sertão* in two different journeys. Whereas the first

²¹¹Permission by Fundação Biblioteca Nacional, Rio de Janeiro.

(between August 1859 and May 1860) took him along the Jaguaribe River to the south of the state, his second trip (between October 1860 and May 1861) served to explore the lands further to the northwest and on to the top of the *Serra Grande*, the “big mountains” bordering the State of Piauí.

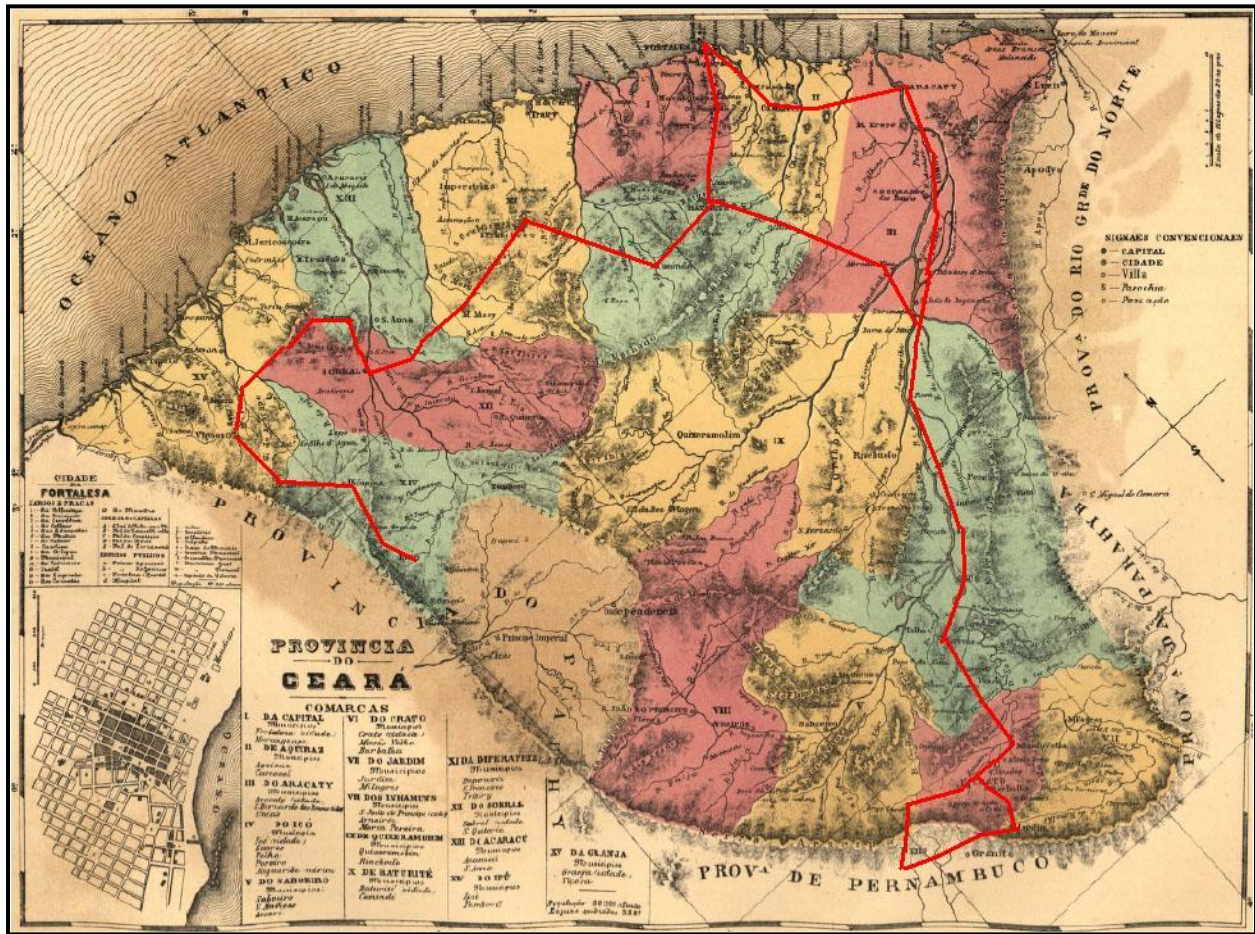


Figure 7.2: Freire Alemão’s approximate travel route over map of Ceará from *Atlas do Império* (Almeida, 1868)²¹²

Freire Alemão registered his personal impressions of his first expedition in a travel diary that remained forgotten for 140 years and was only published recently for the very first time (Freire Alemão, 2006, 2007).²¹³ On his trip, the botanist made use of his social relations to filter

²¹² Library of Congress, digital collection.

²¹³ For a complete bibliography including a list of Freire Alemão’s correspondence, see Damasceno & Cunha (1961, 1994). The collection of the *Biblioteca Nacional* in Rio de Janeiro holds a catalogue of more than 800 documents

out details of flora, fauna and culture from occasional chats, incidental encounters, and private talks. Like a social scientist, the spoken word turned into an essential source of information for him:

One has to add to these writings a large quantity of notes that resulted from investigations, research, transcriptions, etc., to which Freire Alemão, curious and observant, always devoted himself. For him, conversation was a means of knowledge. Even the most unpretentious [talk] provided him with material for reflection and study. From the persons with whom he talks in private, people he comes across, he gathers information of historical, sociological and economic nature and so on. He writes down the price of food items, the quality of water, the different species of cattle, moral concepts, the apathy of the population, the political facts, zoological species, indigenous customs – to sum it up, everything (Damasceno & Cunha, 1961, p.26).

In early December of the year of 1859, Francisco Freire Alemão's travel party was on its way to the town of Crato, the biggest human settlement in the Cariri region that they had chosen as their base to explore the Araripe Plateau in the south of Ceará for the next three months. The scientific commission found a hospitable and lively social network that received the members with open arms.

From Freire Alemão's diary, we can deduce that he seemed to have been an assiduous biologist who described the objects of his studies such as herbs, trees and barks with painstaking patience (figure 7.3). In his annotations, one statement frequently appears in different versions on the pages. Freire Alemão "did some botanical studies" (Freire Alemão, 2007):

related to the botanist, among them many unpublished materials such as the 17 volumes of his *Estudos Botânicos* (1834-1866) and the 9 volumes of *Flora Cearense* (1859-1861).



Figure 7.3: Sample page from Freire Alemão's *Estudos Botânicos*²¹⁴

December 10, 1859: "In the morning, I occupied myself studying some plants" (p.14).

December 11, 1859: "I put myself to work, write, draw, read, etc." (p.14).

December 15, 1859: "I drew and studied some plants" (p.16)

December 21, 1859: "In the morning I did some botanical studies and read the *Araripe* newspaper" (p.18).

December 30, 1859: "This morning I wrote as much as possible, copying the *Araripe* newspaper" (p.21).

January 03, 1860: "This morning I studied some plants" (p.24).

January 23, 1860: "During the morning I worked on some drawings and the government report" (p.40).

January 24, 1860: "In the morning I was copying some articles from the *Cearense* newspaper and making some botanical drawings" (p.40).

Figure 7.4 shows a "word cloud" based on Freire Alemão's diary entries that refer to how he proceeded with his studies during his stay in the Cariri. Words that are used more frequently are rendered more prominent in the image and confirm that the botanist was occupied with botanical studies and plant drawing mainly in the morning.

²¹⁴ Available at <http://bndigital.bn.br/redememoria/viacientifica.html>. Permission by Fundação Biblioteca Nacional, Rio de Janeiro.

Freire Alemão estimated tree heights and circumferences, reflected about the common name of a species, and with an accurate shot from his small rifle, “he separated leaf and flower samples from the branches for his studies and his herbarium” (Gama, 1875, p.74). Even his advanced age did not prevent him from long days of work and study:

Sexagenarian, he does not change his work methods. Once he collected a plant, he examines, describes, and draws it immediately. From this discipline results the sum of his notations: *botanical studies of about 700 plants were carried out during his stay in Ceará* (Damasceno& Cunha, 1961, p.26, *my emphasis*).

In the Cariri, Freire Alemão borrowed local newspapers and relevant writings on the history of the region to copy the contents by hand. Besides this, the mail delivery always represented a special moment for the scientist who was waiting for news from his family and about the social and political life in Rio de Janeiro. Freire Alemão eagerly read his correspondence and saw his almost immediate replies to these letters as a break in his routine.

However, when he stayed in his room, constant and frequent interruptions occurred. There was a constant come-and-go of visitors. Almost every day, the botanist received visits from the local authorities and personalities, beggars and vendors who were looking for an easy dime, or even sick people who heard about the arrival of the scientists and insisted that “the doctors, be they doctors of medicine or not, had to attend them” (Braga, 1962, p.64).

The commission members participated in the social life of the town, paid visits to the local elite, went to mass in the Catholic Church and got involved in traditional cultural activities such as silent auctions and carnival. The house they rented was located in the center of town, about one block from the cathedral and the main square and in the vicinity of the residences of some of the local authorities. Especially the “circle of Sucupira” (*roda do Sucupira*) was a welcome reference point for Freire Alemão to chat and receive information on local land and life.

The botanist produced a pencil drawing of the view he had from his window (figure 7.5) in the *Rua do Fogo* (“Fire Street”)²¹⁶: one or two-storey buildings with inclined roofs and rectangular windows, a few trees, and the church tower looming in the distance.

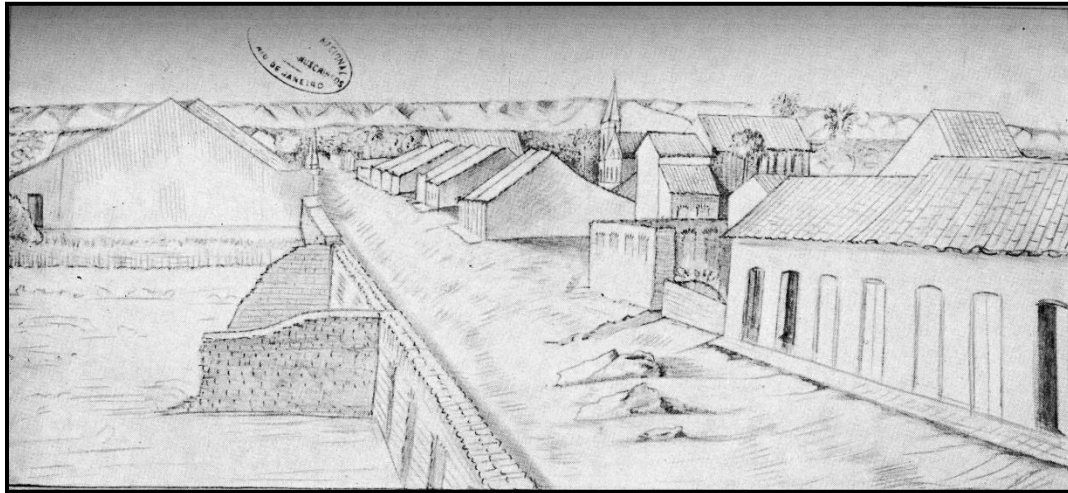


Figure 7.5: Partial view of the town of Crato, drawing by Freire Alemão (Damasceno & Cunha, 1961, between p.299 and 300)²¹⁷

The commission members did not only pursue their scientific interests, but also involved themselves in social issues. The local newspaper *O Araripe* opened space for Freire Alemão and his colleagues, and the scientists wrote several shorter articles about their impressions of the region. A particular topic was the local prison building and its inhumane conditions for the prisoners that the commission members accused, most probably influenced by the local journalist João Brígido who had been criticizing the deplorable state of conservation of the edifice since 1857. According to him, the first floor was “only ventilated through two windows that were four hands wide and at a height of about seven hands from the ground. The air was affected in such a way that one wondered how someone could survive there for eight days” (quoted in Pinheiro,

²¹⁶ “Fire Street” does not refer to any catastrophic event in the past, but alludes to a different kind of “fire” to be extinguished. The street was known as the red light district of the town in the past. The present name of the street is *Rua Senador Pompeu* (Pinheiro, 1950, p.82).

²¹⁷Permission by Fundação Biblioteca Nacional, Rio de Janeiro.

finished a painting of the town from the *Barro Vermelho* elevation (figure 7.7).²²⁰ From a bald hill without vegetation, and close to a simple mud hut, Carvalho captured the town down in the valley, the whitewashed colonial buildings with their red roofs and the open space of the main square with the cathedral, framed by a hazy, green landscape of gently sloped hills with a not too dense tree and shrub vegetation under a cloudy sky.



Figure 7.7: A view of Crato by the painter José dos Reis Carvalho²²¹

Freire Alemão did not restrict his studies to indoor activities. From time to time he went out on shorter excursions to gather more plant material that would provide him with data for his “botanical studies.” With the Araripe Plateau in an almost tangible distance, he scheduled a reconnaissance day trip to the top on December 14, 1859. He described the landscape and land use changes on the steep slope up that changed from densely populated sugarcane plantations and mills with abundant water supply from the Araripe tablelands to a “plain covered with creeping leaf vegetation” (Damasceno & Cunha 1961, p.299). The green lush vegetation

²²⁰ The painting is part of the collection of the local *Vicente Leite Museum*, located in the old prison building next to the main square in Crato. I tried to find the exact view point from where Carvalho had drawn his artwork. However, due to the urban development and the construction of higher buildings, the position could not be identified anymore.

²²¹ Museu Vicente Leite, Crato, permission by Armando Rafael.

impressed the botanist who started to reflect about the regional richness and agricultural potential. Freire Alemão kept his eyes on the flora and wrote down a detailed list of trees and shrubs that he identified on his ascent to the top. Although he did not draw a map, his observations could be used for a vertical plant geography of the plateau, not unlike Alexander von Humboldt’s vegetation profile of the Chimborazo (Humboldt, 1805). The Brazilian botanist divided the Araripe tablelands into three different zones: the “forests in the lower parts,” the slope, and the vegetation on the top. He listed the trees and shrubs he analyzed on his trip in a mix of Latin and popular names. Among his findings, there are hardwood species such as *jatobá* or *angico*, trees that provide soap, timber or charcoal, or popular and questionable denominations such as “heart-of-a-negro” or “dog’s mammaries” (figure 7.8).

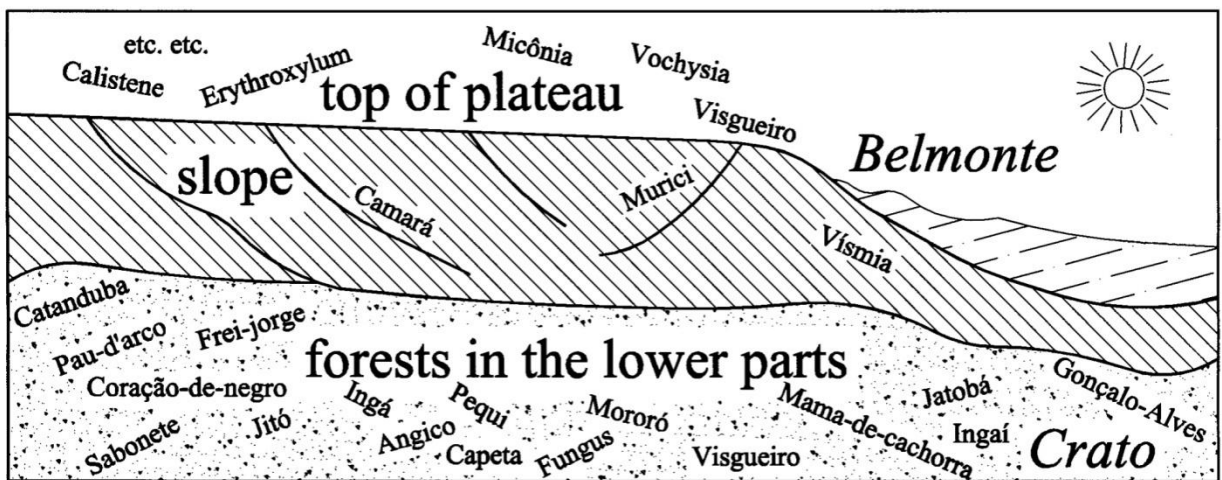


Figure 7.8: Simplified vertical plant geography of the Araripe Plateau

When he reached the top he met “two women and a small boy” in an open shelter who were collecting wild fruits. Freire Alemão used this episode to stress two points he considered vital for the future of the region: the importance of agriculture and the indolence of the regional population:

There is big misery around here; but it is mainly a child of carelessness and apathy. These women have already wasted half a day, and they would also waste the rest of it, to collect wild fruits that would not fill their stomachs up; and the same time used for work in the

field would give them for sure one week of things to eat (Damasceno & Cunha, 1961, p.299).

Freire Alemão's social contacts in Crato resulted in invitations to visit locals at their homes or farms. For example, Gualter Martiniano Alencar from the town of Exu in the province of Pernambuco was a frequent visitor in the botanist's residence who finally convinced the naturalist to go on a trip across the plateau in late January, 1860.

On the following pages I will present details of Freire Alemão's roundtrip of ten days which included multiple crossings of the tablelands (figure 7.9).

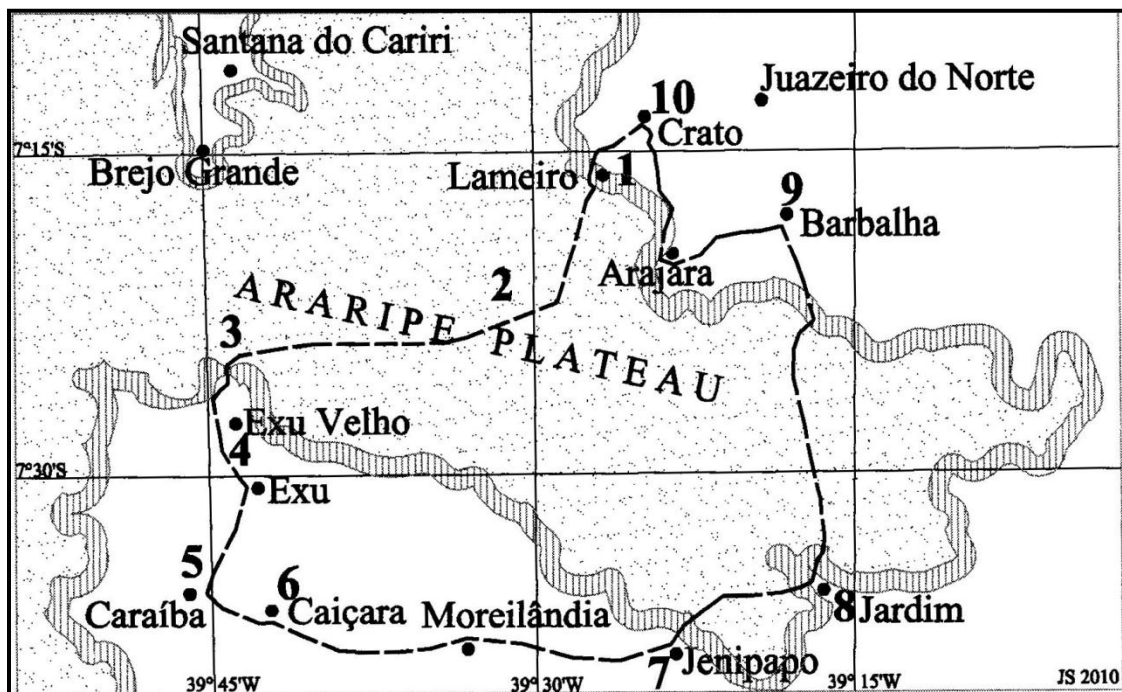


Figure 7.9: Freire Alemão's approximate itinerary over the Araripe Plateau (map modified from IBAMA, 1999)

Relevant points in his trajectory have been indicated by numbers that correspond to a place in the text of his diary. For each station of his journey, I have selected a part of a regional topographic map that I have combined with quotations by the naturalist that I will present at the end of his narrative when he returned to the town of Crato. This cartographic documentation

serves as a “play with maps” and a simple frame (Pearce, 2008) to document the botanist’s trip.²²²

1 Belmonte Slope

On Monday January 30, 1860, at nine o’clock in the morning, Freire Alemão left Crato heading for Exu in Pernambuco on the southern side of the Araripe Plateau. His travel party consisted of Manuel Lagos, the official zoologist of the scientific commission, and his personal slave Domingos, a plant collector named Barreto, and Freire Alemão’s own servant José dos Santos (Freire Alemão, 2007, p.45). The group followed the Belmonte slope “that was considerably damaged from the last rainfalls; and in the most dangerous parts I ascended on foot” (p.45).

2 On the Top of the Araripe Plateau

At 10:30 am they reached the top of the tablelands. Their tired horses were substituted for others that were “on the loose” (p.45) and that had to be caught. After an hour, they continued their trip on the even surface of the plateau. Freire Alemão did not provide many details about the landscapes they had to travel through. He measured distances by time of travel and used changes in the vegetation as reference points. This way, the travelers rode through agricultural lands for an hour and fifteen minutes (equivalent to “two leagues of distance”, p.45) when they

²²² An ideal solution would have been the combination of both text and map elements. However, due to the space restrictions in a dissertation, I had to keep words and representations separate since an elaborate and legible map would not fit into the “letter size” of the paper sheet. Pearce & Hermann’s (2008) map, for example, measures 39 inches by 49 inches. Despite its considerable size, the font still had to be very small in order to include all the details the authors considered essential.

entered the so-called *carrasco* vegetation.²²³ Fifteen minutes later (or one third of a league), they arrived at the edge of the forest where they found manioc plantations and a “hut made of straw, a wheel and a fireplace” (p.45) that is commonly known in Brazil as a *casa de farinha* or “manioc house”, i.e. the place where manioc is cut, shredded, pressed and then roasted in a huge pan over an open fire. Different from the day trip he made six weeks before, Freire Alemão complained about the heat and sought for liquid to quench his thirst:

Contrary to what we expected on the top of the Araripe [Plateau], the sun was very hot, and already with much thirst, we stayed [in the shelter] and drank cider of which Lagos had brought two bottles (p.45).

After 15 minutes of rest and refreshment, the travelers finally entered the Araripe forest. Freire Alemão was quick to point out that the vegetation did not represent a dense forest, but a secondary shrub landscape that did not offer much protection against the sunlight. Almost three hours later the group reached a clearing that the employees of their host in Exu (Mr. Gualter) had cut into the vegetation. Soon after that, Freire Alemão arrived at the southern rim of the plateau that opened up picturesque views of the province of Pernambuco: “the view of a new province and the pleasure to have concluded a long journey dissipated all our irritation and made us happy” (p.46). Once again the travelers found a *casa de farinha*, “but this one was in operation and full of people, men and women, and we approached them to ask for water to drink, which they gave us with satisfaction” (p.46).

3 Descent to Exu

The final stage of the first leg of his trip was the descent to Exu on a new, but unfinished steep trail. Freire Alemão felt horrified when he saw the crudely cut trail in front of him,

²²³ Literally “hangman”, *carrasco* generally designates dry and shrubby secondary vegetation that is distinct from other vegetation types in Northeast Brazil. A translation into English could be brushwood – a thicket of shrubs and small trees that are difficult to penetrate, not so different from the chaparral in California.

plunging about 200 “braças”²²⁴ into the valley: “One walks hanging over an abyss that is only masked by some trees of petty appearance!” (p.46)

4 Exu Velho (“Old Exu”)

As a result of this difficult descent, the travel party arrived at *Exu Velho* in deplorable conditions: “tired, soaked in sweat and covered with dust” (p.46). Their overall impression of Exu was rather gloomy: “The village is insignificant, of a sad and miserable nature: the main church that had never been finished is falling apart into ruins” (p.46). Mr. Gualter, their host, received the travelers at his residence and offered food and lodging to them: “The table was steaming with poultry stews and was finished off with a huge and beautiful painted tray on which there was a golden tea set made of porcelain, and another tray with selections of cakes and cookies, etc., etc.”(p.47).

The travelers were invited to rest and relax, “lying down and swinging in the hammock, some smoking a pipe, others a cigar and others picking their teeth” (p.49). Freire Alemão noticed that hammocks were essential for the people in the backlands of Northeast Brazil that used them as substitutes for beds and mattresses:

It is the first thing that one does as soon as any kind of visitor arrives: they sling as many hammocks as there are [visitors], washed and more or less rich, according to the fortune of the house owner. When entering the house of a poor [man], he gets up from his hammock and offers it to those who are arriving (p.48).

²²⁴ The Portuguese measure unit *braça* (=hand) is equivalent to 2.2 meters and is comparable, but not equal to the *toise* used in France and its American colonies. In this chapter I make a deliberate use of distance measures from different cultures and periods (e.g. toise, league, km, etc.) in order to point out the relativity of these units that turn a precise conversion impossible. During my travels through Brazil since 1994, I had to face this problem with a certain frequency. When I asked for the distance between two places, a common answer was “one league” which turned out to be something between two and ten kilometers. Distance is conceived “by feeling” rather than by precise measurement.

Freire Alemão's descriptions does not hide his taste for the more sophisticated life style back in Rio, when he mentioned crockery, details of hammocks, pillows and embroidery. He approved the quality of what he was offered on his trip, but became rather impatient with one of the main problems in the dry backlands of Brazil, the supply of water:

There was nothing that we long for more than a bath, but this is something that is rarely offered in the *sertão*; this is, without doubt, due to the lack of water in the summer, and also due to the habit to take a bath in the rivers. And when they bring you water, it is in a small wooden vessel or bowl that the feet hardly fit into: this bowl with water is put into the center of the room and the black [slaves]servants who bring it, with a towel on their shoulders, that has more embroidery and lace than cloth, and besides this, it is hard from the [ironing] starch, is available to wash the feet of the guests and hosts (p.48).

The travel party decided to stay in Exu Velho for one more day. Freire Alemão took the opportunity to collect samples of the local flora. He chose the small elevation behind the farm as an outlook from where he sketched out a map of the region:

I ascended the hill behind the house, with a young man who stayed there [on the farm] hidden because of some love affairs that happened in Crato. I walked around watching the plants and also observed the relief forms of the tablelands, its passageways, etc. in order to draw a map of our travel.²²⁵

After that, Freire Alemão himself or his assistant collected some plants. The rest of the day seemed more like a routine. The botanist frequently used "etc." in his diary entries and expressed his impatience with the documentation of common facts. The reader will never know what the naturalist meant by "etc.": "We had dinner after 3 pm, We drank coffee and had a conversation sitting near the door. Some visitors turned up, sick people who wanted advice for remedies, etc, etc." (p.50).

²²⁵ At the *Biblioteca Nacional* in Rio de Janeiro, I only had access to a low-quality microfilm version of the "map of the voyage that I made from Crato to Exu traveling more than 40 leagues" (BN I-28,9,25, Damasceno & Cunha 1961, p.101). I tried to draw the outlines in my notebook, but the result was not satisfactory. Basically, the map contains about a dozen place names, the travel route, and the ragged outline of the Araripe Plateau.

The scientist understood the importance of rain and remained alert to any changes in the sky.²²⁶ However, a cloudy sky did not necessarily result in rainfall. The *sertanejos*, the habitants of the backlands in Northeast Brazil, could witness long periods with a cloud-covered sky, but without any precipitation. In a letter to his sister Policena (Damasceno & Cunha, 1961), Freire Alemão complained about the weather in the dry backlands that he related to the low standard of “civilization” of its population and vice-versa:

A sky of tin covers this nature [natural landscape], rarely a thin cloud passes in front of the sun, which only would modify the ardor of its rays – when the wind blows, which is very common and one of the forms of relief for the traveler, this does not happen without inconvenience, raising a fine and inopportune dust, and what irritates me most is the heat. For maybe two months the sky has not let fall on us a single drop of water. What a contrast to the life we had in the capital and its neighborhoods; there we had too much rain, fruits started to rot, we walked full of milk, cream, cheeses, and presents such as corn broth, sweets, fruits succeeded without interruption – everything was green around us ... Now we walk sunburned, thirsty. Hungry, without any comfort! But hail thee, Virgin! We are all fat! The *sertão*, the people from the capital told us, is hell in the summer and a paradise in winter, but I have seen that it is neither hell nor paradise. These are poor places, very slack, and the conveniences of life are unknown or hardly enjoyed (Damasceno & Cunha, 1961, p.153-154).

On the one hand, the botanist stressed the importance of the rain for the life in the backlands. On the other hand, it meant a delay of his travels. Due to the weather conditions, Freire Alemão preferred to stay in the house on February 1, 1860, and continued the drawing of the map of his voyage that he corrected with the help of a compass and Mr. Gualter’s knowledge of the regional geography. The botanist noticed the detailed geographic knowledge of the local people that went far beyond the region:

This is something that I noticed here. Almost all the men with whom I held conversations know more or less of the province, and sometimes have knowledge of the adjacent

²²⁶ Throughout his diary, Freire Alemão made countless weather observations that he registered with the exact time of day. Frequently he started his daily routines looking at the sky and describing the cloud movement. A word cloud of his diary entries emphasizes words such as rain, cloudy, thunder, sky, and hot. The Araripe Plateau was an important influence on the weather conditions.

[provinces]; all of them have visited this or that part far away from the *sertão*. They speak of a place, and one asks them what the distance is: 60 to 100 leagues or more. They are also very curious, and what they do not see they know through messages. This is something rare there in Rio [de Janeiro] where everyone only knows about his parish. Maybe these habitants have this mobility due to the easy access to the roads that are always level and the errant life of cattle-raising (Damasceno & Cunha, 1961, p.199).

Without any tasks, the travel party remained idle and even bored, and Freire Alemão confided to his diary that “we spent the afternoon on the porch shooting at little birds and testing our rifles; at night we lay down in our hammocks telling stories” (p.51).

5 Caraíba

On the next day, February 02, in the afternoon when the rain had stopped, the group’s host accompanied the travel party on a two-hour horse ride (“three leagues”) to the next stop, the Caraíba farm that was owned by “some relatives of Mr. Gualter” (p.51). Freire Alemão’s diary provides us with further details of his new accommodation: “we were received by five subjects, some of them of tall stature, in very good conditions, very curious and discreet; all of them white men who gave us a gracious reception” (p.51). The quality of the drinking water was again a reason for Freire Alemão’s complaint: “Unfortunately the water was of such a quality that I was unable to swallow a sip” (p.51).

6 Caiçara

On the following day, the group traveled through “shrublands, forests, and small hills” (p.52) and after “four leagues” they reached the Caiçara farm, “the old property of Gualter’s family since the times of his great-grandfathers who were the heads of the Alencar family and the first colonists of this place who conquered [these lands] from the Indians” (p.52).

The entry in Freire Alemão 's diary refers mainly to the historicity of the place according to the narration of his host: The arrival of the first Alencar in 1710 who built a brick house and began to raise cattle, horses, sheep, and goats, and plant legumes “as they continue doing [today]” (p.53). The lands were “conquered” from the *Caracui* and *Ansu* Indians who were “well-groomed and of bright color” (p.53) and had only recently been subdued.

Once again, the weapons of the travel party attracted the people from the *sertão*: “Lagos entertained [the locals] with his little rifle, aiming at little birds, targets, etc. There was a big quantity of parrots in the trees and in the fields” (p.52).

7 Jenipapo

On February 04, the travelers resumed their trajectory through the landscapes of Pernambuco, passing dry lakes, angular rock formations (*tabuleiros*) and shrublands under a burning sun after a rainy day. The tired group interrupted their ride at lunch time: “at one o’clock we lay down under a beautiful *imbuzeiro* [Brazil plum tree], full of fruits, but green, we refreshed ourselves [in the shade], sat down, took off the horses’ saddles, and waited there for the lunch to arrive” (p.54). However, the servant José and the slave Domingos, who were carrying a complete meal of “slices of grilled turkey and manioc, and a brick of sugarcane sweets” (p.54) had lost eye-contact with the other travelers. Due to this delicate situation, Lagos, the zoologist, “enraged and promised to punish the black [slave], but I tried to calm him down with all my tranquility” (p.54). At 4 o’clock in the afternoon, the group reached the Jenipapo farm at the foothills of the Araripe Plateau. Another relative of the Alencar family offered them a simple accommodation where they would spend the night:

They showed us an old house in ruins, detached from the family home, where we entered. ... The house where we were put up is one that belonged to a Portuguese who built this

small and badly constructed farm, with roof tiles and a support, but without a tiled floor. In one part [of the house], there was an oratory [a small room to make prayers] whose broken door allowed pigs, dogs, chickens, etc. to enter (p.54).

8 From Jenipapo to Jardim

The Jenipapo farm was located close to the slope up to the plateau. At 6:30 on the next morning, Freire Alemão got on his horse again to face another steep ascent, “a bad slope, as all of them are in Araripe, it was necessary to dismount in the most dangerous place” (p.55). After half an hour, the group reached the top. The sequence of changes in the vegetation (forest, *carrasco*, agriculture lands) repeated itself before Freire Alemão descended to the town of Jardim where he stayed two days in order to examine the local fauna and flora, especially the pre-historic fossils, and visit places that, he was told, were relevant to the history of the Cariri region.

9 From Jardim to Barbalha

On February 07, the travel party climbed the slopes of the plateau for the last time, following a trail along a creek from the Jardim valley to its spring. After climbing a mountain path that was “a true and horrible stairway of rocks, but short” (p.59), the travelers crossed the tablelands, “all plain and with beautiful agricultural lands and big leafy trees” (p.59). This time, the grilled turkey was on their menu in the shade of a tree:

At one o'clock we stopped under an enormous *visgueiro* tree [*Parkia platycephala*], and unbridled our horses and let them free; on our feet, we relaxed, ate the grilled turkey with [manioc] flour and drank detestable rubber water that our thirst had turned bearable. When we were eating, flocks of seriema birds sang around us, but we did not see them (p.59).

After one more hour, Freire Alemão approached the northern rim of the plateau where he enjoyed a “beautiful and wide view” (p.60). He initiated his descent to the town of Barbalha that

he reached after two more leagues on horseback: “We entered the town at 5:30 pm, I was all tired, dirty, sweaty, and covered with dust” (p.61). The botanist always had a reference point in all the places he visited. There was always a relative, an acquaintance or a friend of a friend waiting for the travel party. At the same time, Freire Alemão served as a messenger who received and delivered correspondence on his itinerary.

10 From Barbalha to Crato

On February 08, 1860, Freire Alemão completed the last leg of his round trip of about 42 leagues (p.62), having crossed the plateau three times. After three leagues of very hilly and rocky terrain where the passage was difficult “so that I was forced to continue on foot” (p.61), the group reached Crato. The diary entries of the following days mention Freire Alemão’s exhaustion. From February 09 till his departure from the region one month later, the botanist limited his activities to plant studies and the social life in the town. Health problems such a sore throat, fever, stomach problems, and fatigue plagued him till the day of his departure. On March 08, 1860, he made the final preparations for his trip back to Fortaleza where he arrived on April 20.²²⁷

Figure 7.10 is an attempt to (carto)graphically reconstruct Freire Alemão’s trip. I have cut out a rectangle from the topographic map sheets of the region for each stop and added a quotation from his diary to provide further details on land, life, and how he perceived and understood the landscapes of the Araripe Plateau. However, with the exception of the place names (even some of them are ambiguous), Freire Alemão’s descriptions do not allow us to

²²⁷ Freire Alemão wrote about his desolate health conditions and his sadness in detail. He stayed in his room to “study plants”. One sentence repeats itself over and over again in his diary: “Today I did not go out.”

reconstruct his exact route. After 150 years, original trails were overgrown by the vegetation, new clearings were opened, and marks of human settlement and agency left their traces in the landscape.²²⁸ A look at a present-day topographic map shows a maze of trails on the almost flat plateau surface.

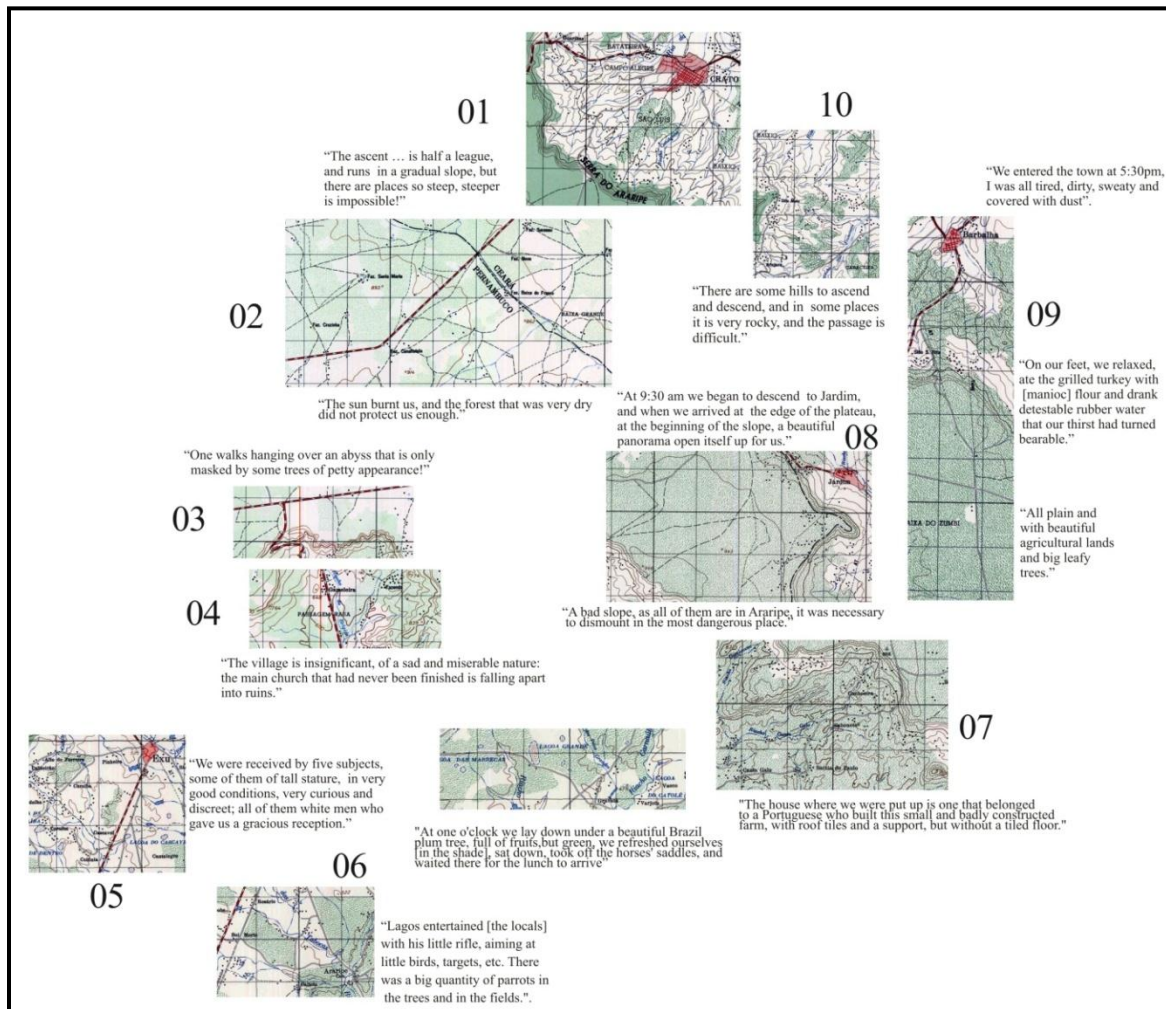


Figure 7.10: A narrative cartography of Freire Alemão's roundtrip over the Araripe Plateau²²⁹

²²⁸ This reminded me of H.D. Thoreau's conclusions of Walden in which he explained why he left the woods: "It is remarkable how easily and insensibly we fall into a particular route, and make a beaten track for ourselves. I had not lived there a week before my feet wore a path from my door to the pond-side; and though it is five or six years since I trod it, it is still quite distinct. It is true, I fear that others may have fallen into it, and so helped to keep it open. The surface of the earth is soft and impressible by the feet of men; and so with the paths which the mind travels (Thoreau, 1897, p.498).

²²⁹ The cartographic material is extracted from the following four topographic map sheets (scale: 1:100,000) which I also used for my fieldtrip in July 2009:

Cartographic Narratives

In the previous section, I have mapped Freire Alemão's journey to the Cariri region and presented details of his writings in words and (carto)graphic images. At this point I will turn to my own attempt to reconstruct (or even rescue) Freire Alemão's experience in the Cariri. In order to engage physically in my own research, I will adapt a strategy similar to an autobiography or an autoethnography.

On the one hand, autobiographical writing in geography reveals the geographer as a researcher *and* a human being (Tuan, 1999; Gould, 1999; Gould & Pitts, 2002), reflected in the "relationship between knowledge and understanding, between experience and expertise, the dream and reality of applied projects and movements, the significance of context in promoting or inhibiting scholarly creativity" (Buttimer, 1983, p.3). Autobiographies may serve different purposes (Moss, 2001, p.10-21): they can be used to give authority and legitimacy to the writing of a geographer, can work as life stories, lifeworld experiences, or self portraits or can represent an auto-reflection or criticism on one's own positionality. Buttimer (1983) nicely affirms that "[i]n each person's life echoes the drama of his or her times and milieu; in all, to varying degrees, the propensity to submit or rebel. Through our own biographies we reach toward understanding, being, and becoming" (p.3). Autobiographical writing contributes to the continued construction (and deconstruction) of geography as a discipline and its builders (scholars, researchers, teachers, students and practitioners) and allows us to "tell us who we are

SB-24-Y-D-II (Santana do Cariri)

SB-24-Y-D-III (Crato)

SB-24-Y-D-V (Bodocó)

SB-24-Y-D-VI (Jardim).

Used with permission by Serviço Geográfico do Exército.

in context of our multiple environments; and to give some clues as to where our world comes from” (Moss, 2001, p.21).

On the other hand, autoethnographic writing in geography is focused on how a researcher positions himself/herself in his/her research rather than on telling others about one’s life.

Autoethnographies are culturally deeper than autobiographies because they force the autoethnographer to “dig” into his or her own life by questioning, interpreting and evaluating his or her own decisions and behavior. In other words, observing the self entails processes “by which the researcher chooses to make explicit use of [his or her] own positionality, involvements, and experiences as an integral part of ethnographic research” (Cloke, Crang & Goodwin, 1999, p.333).²³⁰ In the context of my research, I will only deal with a small segment of my personal engagement in the region. It is not an auto-biography or an auto-ethnography, but rather an *autocartography*.²³¹

In the last decades, diverse authors have used the term independently in different contexts. I have fleshed out elements of several different reflections to define my own conception of *autocartography*. Donald Emmerson (1984), for example, used the term within the context of naming processes of Southeast Asia when he alluded to the European missionaries and other non-natives who practiced an *autocartography* by mapping and naming the region for *themselves*. In her readings of postcolonial forms of socialism in Asia, the feminist and social scientist Susan Bayly (2007, p.37) described the term as “material embodiment of the trajectories

²³⁰Besides this autoethnographic approach defined as “something the researcher does, a particular way of doing ethnography self-reflexively” (Butz & Bessio, 2004, p.353), Butz & Bessio (2004) propose a different use for postcolonial studies in order to investigate how the colonized subjects represent themselves within the context of the colonizer’s worldview. I will use the first definition of autoethnography in my research.

²³¹ Originally and in a different context, cartographers introduced the term auto-cartography in the early 1970s in order to stimulate debates on the perspectives of automation in their field and the emergence of computer-based cartography. Supposedly Anton Shammass (1995) was the first to use the term in a metaphorical sense to define and access Palestinian placelessness in the United States.

through which individuals and family map their moves across the spaces (p.37), while Myers (1997) conceives the term as a form of resistance in a normative world:

Succinctly, autocartography is an incorporation of the ways a subject resists and reconstitutes the very lines of limitation placed on his or her subjectivity. Autocartography is the kind of play one calls to win the struggle between subjective freedom and conceptual over-determination. When radicals discover definitions to be putrid and rules corrupt, we reinvigorate the world by making a shrill sound in a forgotten place (Myers, 1997, p.34).

For me, *autocartography* can be defined as the mental and material processes that aim to map spaces and places in relation to human experience and visual representations (maps, photos, etc.) of reality. In the case of the Cariri, this strategy entails my own ways of mapping the region and the material embodiments and movements that at the same time are subjective forms of resistance to or subversion of (cartographic) over-determination. *Autocartography* is, in fact, my own personal cartography of the Cariri based on my lived experience in the region from August 2002 to August 2006. On the following pages, I will combine photographic and cartographic discourses with my own diary-style observations in order to follow Freire Alemão's steps.

1 Belmonte Slope

July 07, 2010: more than 150 years after Francisco Freire Alemão, I prepare myself to follow his steps through the Cariri.²³² At 7:30 in the morning, I meet with one of my colleagues from the department, Igor, and our driver Oscar²³³ from the regional university in the parking lot. Oscar will take us to the places we are looking for in a beat-up VW van ("type 2" or "Transporter"). Before we leave, we do a briefing of our route and I show my set of regional

²³²For an example of the retracing of travel routes see Walker & Leib (2002) who reconstructed and documented a fieldtrip to the colonial Topia Road in Mexico, done by the Berkeley geographers Robert West and James Parsons in the early 1940s.

²³³All the names in this chapter are pseudonyms.

topographical maps, at a scale of 1:100,000, to Oscar who is a native of the region and has much knowledge of the roads and trails on the plateau, also due to his frequent academic excursions with the biologists from the university and their students. During our trip I take snapshots of the landscape and vegetation and produce several less-than-30-second-long video clips from the car. For this reason, many photos are framed by the van's windshield and "adorned" with the black contours of the wipers and several almost vertical streamline marks of shattered/split glass (figure 7.11).



Figure 7.11: The "photo frame" for my fieldtrip²³⁴

I imagine Freire Alemão on his horse, ascending the plateau on a dirt trail passing first urban houses, then farms or sugar mills, while the people looked at him, greeting with some astonishment since strangers were not so frequent in the region at that time. Whereas Freire Alemão reached the top of the plateau "all sweaty," our trip is easier: motorized, faster, sometimes too fast. On a narrow and potholed asphalt road to the plateau we can see a mix of architecture on both sides: simple one-storey houses, weekend homes with lush gardens; many of them are hidden behind stone walls and fences. No-one is greeting us. The green wall of the

²³⁴ All the photos reproduced in this chapter are snapshots that I took with my own digital camera on July 7, 2009.

tablelands is omnipresent in the background. A large, bright linear clearing in the vegetation indicates the trajectory of the road to the top (figure 7.12). The further we ascend the scarcer the houses. We reach the end of the constructed area and climb the slope in first gear (figure 7.13).



Figure 7.12: Architecture and landscape on Belmonte slope

The road is cut into the yellowish sandstone. A large outdoor sign tells us that the state government has released a considerable amount of money to repair the tar macadam surface that had been damaged by the heavy rainfall in winter.



Figure 7.13: The steeper part of the Belmonte slope

2 On the Top of the Araripe Plateau

We reach the top. A small, but empty house run by the federal environmental agency IBAMA serves as a kind of entry gate to the plain surface on the plateau. The road turns into a sandy dirt road. The topographic map (figure 7.14) limits itself to a small black square under the name *Serra do Araripe* that symbolizes the building. Rippled contour lines register the steep ascent. A trail (dashed line) branches off to the right about one hundred yards further on.

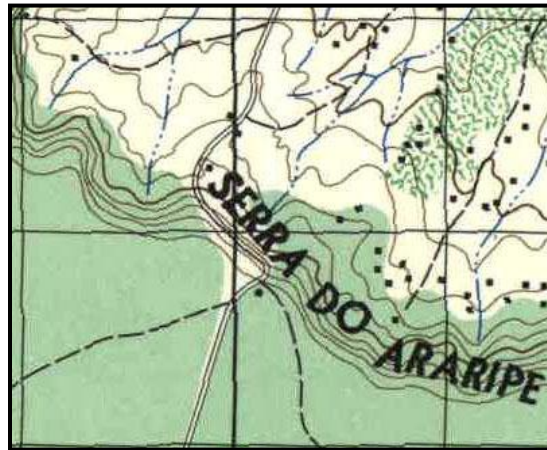


Figure 7.14: Detail from topographic map: The IBAMA house, the slope, and the trails²³⁵

On a reconnaissance trip with Samuel, a regional geographer in the week before our trip, I was told that this was the trail on which Freire Alemão traveled: a narrow path through shrubs and trees, intransitable for our van and locked with a chain (figure 7.15).



Figure 7.15: The closed trail

²³⁵ Detail from map sheet SB-24-Y-D-III (Crato). Used with permission by Serviço Geográfico do Exército.

A road sign at its entrance has been stripped of its contents. The white and empty surface has been used as a shooting target and is marked by bullet holes. However, if Freire Alemão passed *exactly* on this route remains speculation.

We follow the main road on the plateau that the map classifies as “road with loose surface, transitable under good and dry weather conditions.” Our van glides over the loose sand at a speed of about 30 miles per hour.²³⁶ The photo snapshots I take from our car in motion only reconstruct incompletely the scenario: the almost straight line of the bright sandy surface, framed by shrubby, but dense vegetation on both sides of the road (figure 7.16).



Figure 7.16: Road conditions on plateau top

About a league further ahead we reach a bifurcation and enter a narrow path. The vegetation has grown to such an extent that it forms a kind of tunnel (figure 7.17). Tree branches whip and scratch the van. Oscar does not reduce the speed and chattily tells me and Igor about

²³⁶ The road is the main route for students from Moreilândia in Pernambuco who study at the regional university. During the week, their old bus crosses the plateau on a 120-mile-roundtrip through complete darkness.

“what is going on” in this place.²³⁷ He knows where each bifurcation or trail leads to and even provides us with his estimates for each distance:

Igor: And here to the left, where does it go? Jardim?

Oscar: Jardim. No, Arajara. Right here you go down to Arajara.

Igor: Now this is the border between Ceará and Pernambuco, isn't it?

Oscar: Further ahead, you still go some 12, 13 km. But this road here gets straight to the border.



Figure 7.17: Narrow path on plateau

Despite the rather dense vegetation with only a few breaches, almost all the lands are fenced with barbed wire. Oscar affirms: “this one has an owner,” and mentions the name of several notables from Crato who acquired the land titles of large properties on the plateau.

After about another league (using Freire Alemão’s measurements), we reach the asphalt of the Exu road. One more “league” and we cross the state border from Ceará to Pernambuco. An overhead road sign in white letters on green background (figure 7.18, right sign) tells us that “Ceará thanks you for your visit.” On another sign on the left-hand side, the distances to three towns are indicated. Exu, our destination, is 43 km away. The third sign in the center refers to the abstract character of borderlines: white arrows on blue background say that the way “up” is Pernambuco, “down” goes to Ceará. However, the vegetation has changed. In Pernambuco, there

²³⁷Conversation during my van ride with Oscar and Igor on July 07, 2009.

are fewer trees and more slash-and-burn fields on the roadside. Cattle herds, pedestrians and cyclists use the asphalt road and caution the drivers to slow down (figure 7.18, middle). Oscar stops for a moment to show us a *casa de farinha*: different from Freire Alemão's straw hut, it is made of clay bricks, but at present not in use (figure 7.18, right).



Figure 7.18: Signs at state border, rush hour on Crato-Exu highway, and a *casa de farinha*

3 Descent to Exu

Three more leagues and we initiate our descent to Exu. The road is less steep than the slope on the north side and smoothly takes us downhill (figure 7.19). Ragged rocks and erosion scars appear in the green wall of the plateau. After the rainy season, the vegetation is very lush and lianas have grown over the roadside.

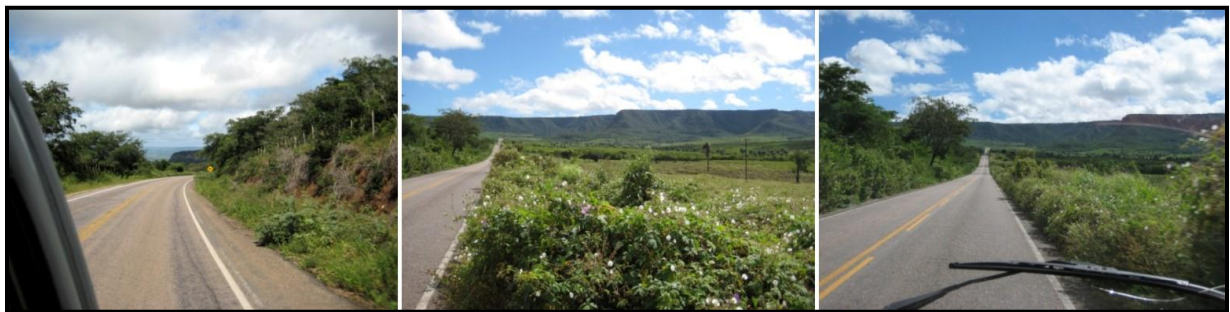


Figure 7.19: Downhill slope from plateau to Exu

Different from Freire Alemão, we do not find the old settlement in our first attempt. Oscar does not reduce our speed downhill so that there is no time to check the map and look for the entrance to Exu Velho. Although we know that we missed the entrance just after the descent from the plateau, the only one on a stretch of eight miles, we drive on through the green

landscape till we reach the location of the “new” Exu that had been transferred from its original position at the foothills down to the valley shortly after Freire Alemão’s visit. Constant landslides had made the life in the old settlement too dangerous.

A large outdoor sign at the town entrance announces Exu’s musical heritage (figure 7.20): the popular musician Luiz Gonzaga (1912-1989) claims that “here I left my heart” – next to the town council’s marketing for an “Exu for all.” We get out of the van in downtown to ask for directions.



Figure 7.20: Town entrance of Exu

On the main square, in front of the church, we meet an elderly man who wears a round leather hat in the tradition of Northeast *vaqueiros*, Brazilian cowboys (figure 7.21). A small talk develops:

Vaqueiro: They say it is there in Gameleira, right?

Oscar: There in Gameleira.

Me: But are there any ruins, the ruins of a church?

Vaqueiro: No, there isn’t, but some church walls are still there.

Me: And this is really in Gameleira?

Vaqueiro: In Gameleira.

Oscar: The farm is on the slope, isn’t it?

Vaqueiro: Yes, pretty close to the mountains.

Me: Pretty close to the mountains.²³⁸

²³⁸ Interview on July 07, 2009.

Our conversation is a sequence of affirmations and repetitions. I notice that Oscar frequently repeats my questions as if he were translating what I say to the old man.²³⁹



Figure 7.21: A local informant in the main square of Exu

4 Exu Velho (“Old Exu”)

We drive the way back to the slope and enter the place known as Gameleira, about two leagues from the town. On a small dirt road we reach the farm where Sebastião, an aged local farmer, receives us. He tells us details about the farm history: in the past he planted a lot of sugarcane, there was abundant water that later on was diverted from its course to guarantee the water supply for the town population, and not the farms.²⁴⁰ I ask Sebastião about the church ruins and he confirms their existence a short walk away from the farm building, “covered by forest because this year’s winter was very heavy, but we ask to clean [the trail], but everything is

²³⁹ Our chitchat did only confirm what we already knew. Unfortunately, I forgot to show the topographic map to the vaqueiro in order to obtain further details.

²⁴⁰ Interview with Sebastião on July 07, 2009.

covered in forest, and there are also bees, those Italian bees.”²⁴¹ Sebastião calls two boys, Joaquim and Jorge (around 9 or 10 years) and asks them to accompany us on our way to the church.

We pass a small hill with low, grassy vegetation, an *opuntia* plantation (a cactus species used to feed cattle during droughts) and coconut trees. This must be the hill near the house where Freire Alemão drew his map of the region (figure 7.22).



Figure 7.22: Freire Alemão’s hill in Exu Velho

The trail leads us through an area of flood lands (*brejo*) where a family is washing clothes. We move on through the hip-high vegetation and reach our destination after five more minutes: overgrown with lianas and other vine-like plants, the thick church walls emerge in the landscape (figure 7.23): a bombastic structure with intact gothic arches, like a fortification without a roof.



Figure 7.23: The church ruins in Exu Velho

²⁴¹ I did not find any bees, but when I walked through the ruins, a wasp attacked me and bit me on my forehead.

We walk through the ruins. Remnants of foundations and a wooden cross loom out from the vegetation. So do the snakes (figure 7.24). Our two boy guides warn us two times about poisonous snakes that languidly lay in the shade of the grassy and shrubby vegetation. In another place we find the old skin of one of those reptiles. Our experience is different from Freire Alemão's observation almost 150 years ago: "In Crato, they say, there are many snakes, but there I did not have any opportunity to see any" (Freire Alemão, 2007, p.125).



Figure 7.24: A snake in the underwood

The massive church walls are marked by innumerable graffiti (figure 7.25) carved in the slightly brittle sandstone, most of them from more than three decades ago: Ana, Maria, Pinau, Dumga, Vita, Edna, Edina, Zezé, Estácio, Ribamar, Fitita, Chico, Lala... Some carvings are dated: Lieutenant Gusmão was there on December 14, 1967, so was Pedrinho on September 16, 1968. Freire Alemão was there on February 01, 1860, but he did not leave any message for posterity – at least I did not find any records from 150 years ago. We leave the impressive stone ruins in the middle of nowhere and return to our van in order to continue our trip.



Figure 7.25: Human markers on the walls of the church ruins

5 Caraíba

Freire Alemão did not mention any details of the landscape that he saw on his trip from Exu to Caraíba. Our driver Oscar asks for directions in several places and receives contradictory replies. We decide to take a right turn at the gas station soon after the town center and follow a cobblestone road that passed through a part of the town with simpler houses and open sewage and turns into a dirt road about half a mile further onwards. I am looking for a left fork that according to my map would lead me to Caraíba. After several failed attempts, we choose a minor dirt road that gradually narrows into a path (figure 7.26, left).



Figure 7.26: Path to Caraíba and Landscape with corn and rock formations in Caraíba

Twigs and branches are banging on our windshield and scratch the van that is jumping up and down on the irregular surface. On the right-hand side, an edgy rock formation appears (figure 7.26, right) as if someone had put one rock block on top of the other.

We stop at one of the houses (figure 7.27, left) and talk to its owner who tells us to visit his relatives in the neighboring residence. They should be able to give us more trustworthy information. The property is bounded by a simple wire fence. On our arrival, the head of the family (figure 7.27, right), Walter, gives us the directions and starts to make a drawing of lines and points with a long stick in the dirt. I get very excited because this is one of the moments I have dreamed of, the opportunity to register and record popular ways of mapping.



Figure 7.27: A property in Caraíba and local informants

In my romantic vision, I imagine all those ephemeral maps that indigenous people drew in the sand that soon got wiped out, trampled on, or blown away falling into oblivion. This situation reminded me of what Robert Rundstrom (1990) observed during his fieldwork with the Inuit when he asked them about the use of material maps:

One Inuk elder told me that he had drawn detailed maps of Hiquiligjuaq from memory, but he smiled and said that long ago he had thrown them away. It was the act of making them that was important, the recapitulation of environmental features, not the material objects themselves” (Rundstrom, 1990, p.165).

I hurry to our van in order to pick up my camera and my digital recorder. Then I ask Walter about the oldest houses in the neighborhood, and he begins to trace a thick meandered line in the dirt which represents the course of the Tabocas Creek (figure 7.28), commenting on his drawing and speculating about the place we are looking for:

It is in Caraíba of the Arvelim [Avelinos]. I am sure. Over there near the river was a big house made of *taipa* [rammed earth], you see. It is there where you pass the mango trees [Walter scratches the position of the house with his stick on the ground]. It is in the direction where you came from... That's in Gadeia [Gadelha], São Luis. It's where the creek passes, here at the roadside, here are some old mango trees [he scratches the ground with his stick] and an old house made of rammed earth as they did in the past.²⁴²

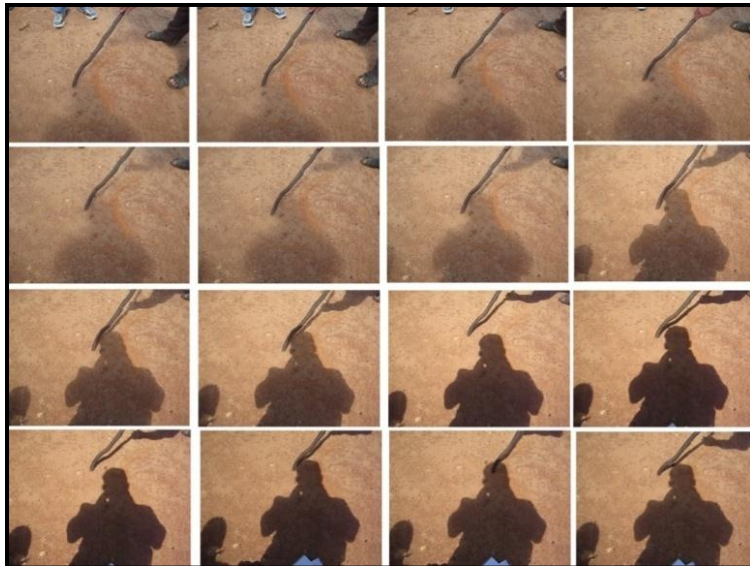


Figure 7.28: Documentation of the drawing in the sand

The short video clip in figure 7.28 that I have converted into a photo sequence could only reproduce the drawing process incompletely. The scratching movement of the stick on the hard soil cannot be represented this way and is literally obfuscated by my own silhouette that is projected on the drawing.

The house does not exist anymore. Using Gertrude Stein's (1937, p.289) words when she revisited her home town Oakland, "there is no there there." I have another look at the

²⁴² Informal conversation with Walter, recorded on July 07, 2009.

topographic sheet. It shows two places with the name Caraíba (figure 7.29). The toponym *Colônia* (= colony) also seems to be suggestive. We wave goodbye and manage to find an exit to the asphalt road near the municipal slaughterhouse indicated on the map as *Boi Morto* – dead bull.

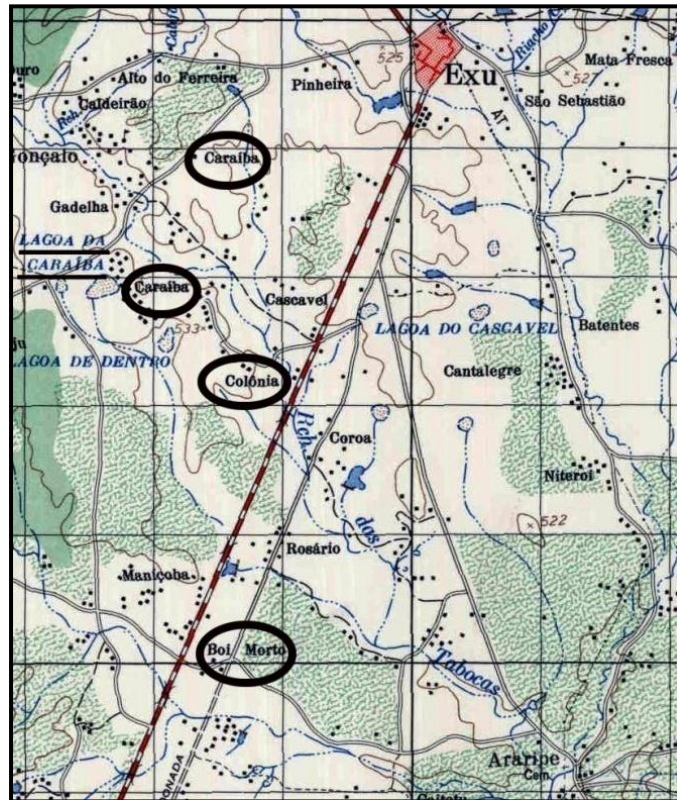


Figure 7.29: Topographic map: where is the right Caraíba?²⁴³

6 Caiçara

We cross the main highway and follow a secondary road for about 5 miles when we reach Freire Alemão's next stop, the Caiçara farm in the small hamlet of Araripe (figure 7.30), the home of Mr. Gualter's brother. We talk to the house owner, a middle-aged lady and a direct descendent of the Alencar family. She allows us to visit the John the Baptist church next door. Oscar, our driver, turns a huge iron key in the hole and opens the door to the interior: a dark

²⁴³ Map sheet SB-24-Y-D-V (Bodocó). Permission by Serviço Geográfico do Exército.

nave, bat droppings on the floor, a constant humming announces the presence of swarms of wasps. A hand-colored wooden Jesus figure with gold foil is locked in an iron cage above the altar to keep at bay potential thieves.



Figure 7.30: The hamlet of Araripe

On one of the walls hangs a portrait of Gualter Martiniano de Alencar, the Baron of Exu (figure 7.31, left): a gentleman with a serious look and a grey moustache dressed in a blue military jacket with golden buttons and epaulettes and white trousers with a fine red vertical stripe. His left hand holds a bluish sword in its sheath that almost touches the floor. His right hand leans on a wooden piece of furniture with his blue uniform hat on its top.



Figure 7.31: Portrait and grave of Gualter Martiniano de Alencar (Baron of Exu)

The lady points to a room on the other side of the altar where the humming of the wasps is more intense. With the help of my digital camera's powerful flash, I am able to illuminate the dark and take a snapshot of the gravestone in the center (figure 7.31, right): "Here lie the mortal remains of his Excellency the Baron of Exu who passed away on the 22nd day of July, 1889, at 67 years of age." The Caiçara farm where Freire Alemão stayed for one night is nearby. We leave the hamlet, pass the cemetery and search for the farm. After more than ten miles driving to the east (Oscar sped up again), we feel that we lost our direction one more time. We return to the hamlet and find the hidden entrance to a dirt road that leads us to the remodeled farm building, a massive house with thick brick walls (figure 7.32).



Figure 7.32: The Caiçara farm in Araripe

7 Jenipapo and End of Journey

Due to our cartographic miscues, Oscar is in a hurry. It is already in the middle of the afternoon, and we have not travelled half of our itinerary. Leaving the place of rest of the Baron of Exu in Araripe, Oscar speeds up on the highway to the next town, Moreilândia whose old name still figures on the map: Sítio dos Moreiras, place of the Moreira family, now it is the "land

of the Moreiras” - Moreilândia (figure 7.33). On the way I can see a large lake (named Lagoa Grande on the topographic map) that could have been the dried out lake that Freire Alemão saw about a league away from Araripe. However, I fail to find the majestic Brazil plum tree under which the botanist had a rest and waited for his lunch in vain.



Figure 7.33: Detail from topographic map: Moreilândia (Sítio dos Moreiras)²⁴⁴

We arrive at the town of Moreilândia past lunchtime. After a short stop during which we added something edible to our stomachs for the first time, we continue our trip to the Jenipapo farm. The cartographic sheet boldly mentions a place with this name that branches off into a dirt path (figure 7.34) near the small settlement of Canta Galo – where the rooster crows. However, in Canta Galo we are told that Jenipapo is further up the slope. The Jenipapo on the map does not exist, at least not in the place the map indicates.²⁴⁵

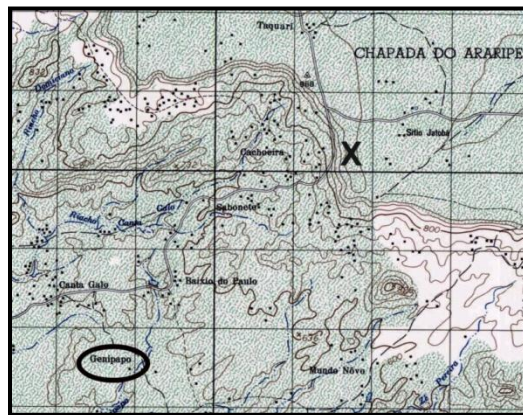


Figure 7.34: The false (circle) and the real Jenipapo (X)²⁴⁶

²⁴⁴ Map sheet SB-24-Y-D-V (Bodocó). Permission by Serviço Geográfico do Exército.

²⁴⁵ Jenipapo on the map is written with a G, maybe owing to the scientific name of the *jenipapo* tree, *genipa americana*. However, the sound of G and J is the same in Portuguese. For this reason, many place names have ambiguous spellings.

²⁴⁶ Map sheet SB-24-Y-D-VI (Jardim). Permission by Serviço Geográfico do Exército.

We have to follow the secondary road far more to the east. The path narrows again, we pass a simple house on our way. Nobody there, pieces of laundry are hanging on the wired fence (figure 7.35, left). We are getting tired, and the road conditions worsen. Finally we arrive at Jenipapo: no sign, no other indication of its existence. I only remember a woman carrying laundry who was about to slip through a wooden gate when we asked her for the name of the place, and she said “Yes, this is Jenipapo.”



Figure 7.35: Scenes from the path to Genipapo and the top of the plateau

I did not take any photos in the waning sunlight, but I got out of our van to register the geographical latitude and longitude of Jenipapo with my GPS: UTM coordinates: 452593E, 9157357N, 482m, Datum: SAD69. Who cares?²⁴⁷ I do, because back from my fieldtrip I was able to locate the “real” Jenipapo on the topographic map, more than a “league” away from the misplaced locale, at the beginning of the slope to the plateau.

Freire Alemão only took 30 minutes to reach the top and enjoy the picturesque views of the *sertões* of Pernambuco. Our mission is more critical. Road conditions have deteriorated considerably (figure 7.35, right). From time to time we ask locals we meet on the way if the road

²⁴⁷ In my cartography classes at the regional university, I noticed that my students always became very excited about our GPS measurements. When I read the coordinates of our position aloud to them, they wrote them down with a certain air of solemnity, without questioning the veracity of the data. Is the knowledge of where we are exactly a form of knowing our place in the world or only a pair of coordinates based on a geodetic datum?

to the top is transitable, but their replies do not give us a satisfactory answer. One of them says that there would not be any problem, while another man mentions a moving truck that remained stuck on the slope for several days. Should we return and try a safer route? Oscar starts to show his concerns about our gasoline reserves. Evidently there is no gas station on our way, only back in Moreilândia, about four leagues away. As we ascend on the trail, pebbles and sharp rock mix with the road surface. The bottom of our van is constantly scraping the rough ground. The trail gets steeper and steeper, and rougher and rougher, but when I ask Oscar from time to time if he wants to go on, he always nods. After 30 more agonizing minutes we reach the top of the plateau. The view is as Freire Alemão had promised: a dark green landscape of agricultural lands below, a cloudy, almost ghostly scene in the late afternoon (figure 7.36).

On the plateau, the landscape undergoes a complete change: a perfectly linear dirt road cuts the light vegetation of the plateau. A bar with a billiard table indicates the presence of humans. We follow the road for another 10 miles and reach the main highway between Jardim and Barbalha.



Figure 7.36: Panoramic view from top of plateau to the south

At this point, I make a difficult decision. It is getting dark and late so that we decide to return to Crato and leave the remaining itinerary to Freire Alemão himself. In February 1860, the botanist spent two days in the town of Jardim in the valley and crossed the plateau one more time, following a long path through the shrubby vegetation. Ours is a straight line on the map, classified as “loose or thin surface, two or more lanes”. We have to use an improvised dirt road that runs parallel to the official highway that is abundant in potholes that make reasonable travelling impossible (the map does not tell us). The landscape we see is very similar to the mental map drawing of one of the students at the regional university (figure 5.28): a monotonous tree landscape on both sides of the road, with occasional entries – blurred by the clouds of dust blown up by the passing cars and vans. Once we descend from the plateau, Oscar speeds up on the broad highway back to Crato where we arrive around 7 pm, in Freire Alemão’s words, “tired, dirty, sweaty, and covered with dust.”

(E)motional Mappings

Are Freire Alemão’s mappings of the Cariri region comparable to my own experiences? Supposedly he did not have a map to direct him across the plateau. Local guides and a network of social relations connected the points on his journey from Crato to Exu and back. In my case, I had access to a set of topographic maps, but even so our “travel party” chose a wrong track several times during our trip. Do maps help us to find or to lose our way? For Tim Ingold (2000, p.219), it is matter of knowing and establishing personal bounds, and not of looking at maps: “Ordinary wayfinding, then, more closely resembles storytelling than map-using”. I am not sure if I can agree with this statement. During my trip I had to ask many passersby for directions.

Some of them shrugged their shoulders while others presented their own imagined route. They told me stories that did not result in successful way-finding.

On the other hand, the use of maps did not help me much, either. However, in my own defense, I must say that the topographic maps were not very detailed (scale 1:100,000), and that the area we visited was situated in the intersection of four different map sheets produced by different survey teams in the 1960s. As a result of this, different details, colors, and landscape readings were included on the charts, whereas roads surreptitiously turned into trails or even disappeared when they entered a neighboring sheet.

There they are again, the two cultures of cartography and Don Quixote's parable of courtiers of knights-errant. On the one side, there are people who know the world through maps; on the other side, those who map the world through their knowledge (which does not necessarily result in material maps). The American writer John Steinbeck describes these two extreme attitudes in the following way:

There are map people whose joy is to lavish more attention at the sheets of colored paper than on the colored land rolling by. I have listened to accounts by such travelers in which every road number was remembered, every mileage recalled, and every little countryside discovered. Another kind of traveler requires to know in terms of maps exactly where he is pin-pointed every moment, as though there were some kind of safety in black and red lines, in dotted indications and squirming blue of lakes and the shadings that indicate mountains. It is not so with me. I was born lost and take no pleasure in being found, nor much identification from shapes which symbolize continents and states" (Steinbeck, 1997, p.55).

The stories and the maps involved me in a cartographic dialogue, but were not sufficient to find my way. I had to reflect about making my own "maps" that were not restricted to cartography but also included my autocartography in the form of other images and text

elements that helped me see the landscapes of the Cariri not from a fixed position, but on the move.²⁴⁸ As Sarah McKian affirms:

[a]lthough maps have also been criticized for portraying a partial and static representation of space, they have at least in our imagination allowed us to explore and move about the spaces they seek to (re)present. *The notion of the map therefore appears to capture better the ideas of engagement, movement in everyday life, and the experience of experiential space* (MacKian, 2004, p.628, my emphasis).

In order to indicate the links between emotions and cartography and the non-static nature of mapmaking and charting, Chris Perkins (2009, p.130) uses the playful term “(e)motional mapping”, the charting of human feelings onto a cartographic landscape.²⁴⁹ This approach helps the mapmaker to overcome the divide between representation and practice, body and mind. It is not the omniscient cartographic eye that Donna Haraway (1991, p.191) tags as “God-trick,” but a “ground perspective” from within the field of observation that makes the cultural in cartography.

Making a map frequently starts with the drawing of a line which is a universal feature, and it is up to the mapmaker to bring life to it:

To mark an individual’s path across a map, regardless of the scale of that map, we draw a line. The problem with that line is that it does not reflect the fullness of the world as we experience it while traveling along a path. Traveling is not a linear sensation but a sense of enclosure by a moving landscape (Pearce, 2008, p.25).

Mapmaking also means connecting points. The understanding of places is not based on sites and their positions, but about what they can tell us. In other words, “places do not have locations but histories. Bound together by the itineraries of their inhabitants, places exist not in space but as nodes in a matrix of movement” (Ingold, 2000, p.219).

²⁴⁸ Tim Cresswell stresses mobility as a central aspect of human life: “Why is geography equated with fixity and stasis? Mobility is just as spatial – as geographical – and just as central to the human experience of the world, as place.... Mobility is a way of being in the world” (Cresswell, 2006, p.3).

²⁴⁹ For a dense discussion on human feelings in fieldwork see Sarah Tarlow’s (2000) reflections on emotion in archaeology.

Ingold calls this matrix a *region*. In my case, it is the Cariri region. Whereas using a map means “to plot a course from one *location* to another in *space*, wayfinding, by contrast, is a matter of moving from one *place* to another in a *region*” (Ingold, 2000, p.219, original emphasis). Mapping a region is not the cartography of places, but the movement from one place to another, because

[j]ust as staying in place corresponds to *position*, and moving the whole body within one locus answers to *place* proper, so moving between places corresponds to an entire *region*, that is, an area concatenated by peregrinations between the places it connects (Casey, 1996, p.24)

I have come full circle with my mappings and mapmaking in and of the Cariri region. Catching the movement and paraphrasing Herman Melville, in my research “I have [not] swam through libraries and sailed through oceans” (Melville, 1892, p.182), but moved through maps and regions. Even though, I know that out there, innumerable stories are still waiting to be charted.

Chapter Eight: Final Considerations Cultural Cartographies and Cartographic Cultures

“Mapping may be angry, boring, celebratory, exciting, happy, painful, persuasive, playful, proud, reassuring, revealing, restless, sad, or wistful. As human practice we can make it what we want. And the limits to what may be known about mapping are similarly boundless”
(Perkins, 2009, p.397).

In the preceding chapters my goal was to present and apply four different qualitative methodologies that I labeled cultural-cartographic and that critically investigated the relations between knowledge and representation, culture and cartography, society and maps through the example of a case study, the Cariri region in Northeast Brazil. My long discussion of research strategies and empirical findings aimed to indicate that mappings, both in their literal and metaphorical sense, open up a whole universe of possibilities and perspectives for the mapmaker and map reader that are not restricted to the academic setting, but could also be of practical use in society. The epigraph to this concluding chapter serves to emphasize this point: mappings are human practices that trigger and are triggered by our own worldviews and behavior.²⁵⁰

From a methodological point of view, Denis Cosgrove affirmed that there are two different starting points for these cultural cartographies: the map itself and the processes of mapping:

[C]ritical studies of cartography can proceed from two directions: either through a study of the finished map – judging its function, technique, aesthetics and semiotics; or through a study of mapping processes, conventionally grouped under the headings of survey, compilation and design (Cosgrove, 2008, p.156).

²⁵⁰ During the almost four years of my empirical and archival research, I had many angry, painful, and restless moments interspersed with excitement, happiness, and playfulness. I also know that the readers of this dissertation may equally have been angry, bored, excited, or sad.

For my own “cartographic adventure” I have followed these “two directions” at the same time. Products (maps) and processes (mappings) cannot be separated from each other, and maps are always included in the mapping process:

If a map is a completed document, mapping refers to a process – ongoing, incomplete and of indeterminate mutable form. Mapping refers to plotting points and finding common terms of reference with which to analyze data; it benefits from the lack of finality denoted by the word map (Abrams & Hall, 2006, p.12)

Landscape architect James Corner is even more specific about mapping when he describes it as an active process of finding, discovering, rediscovering, and unfolding:

As a creative practice, mapping precipitates its most productive effects through a finding that is also a founding; its agency lies in neither reproduction nor imposition but rather is uncovering realities previously unseen or unimagined, even across seemingly exhausted grounds. Thus, mapping *unfolds* potential; it re-makes territory over and over again, each time with new and diverse consequences (Corner, 1999, p.213, original emphasis).²⁵¹

Maps and mappings are linked to spaces that could be real or imaginary (Manguel & Guadalupi, 1999). I selected the Cariri region in Northeast Brazil as my most convenient choice and “open-air laboratory” in order to test my ideas empirically and critically evaluate my approaches. Factors such as access to people and places, familiarity, and existing infrastructure led to my decision. Obviously, these cultural-cartographic studies are not restricted to the regional level, but can also be performed at different scales. It could also have been a neighborhood, an urban slum, a town district, a rural community, a county, a state, a country, or even a continent. The results would vary considerably due to the different scales of perception, interaction, and representation, from the intimate lived experiences and micro-geographies of our immediate environments with their blurred boundaries to abstract geopolitical territories traced

²⁵¹ In the introductory chapter I have mentioned that culture, region, and maps are “slippery concepts”. John Pickles adds the term mapping to this list since “information is itself not merely given to us naively, but it is a product of norms, standards, values, and interests” (Pickles, 2004, p.75) that depend on specific social, cultural and economic factors and settings.

with bold pencil lines on a sheet of paper. At a regional scale, issues of identity and regional discourse may prevail, whereas a study in a larger-scale setting such as a small village or an ethnic neighborhood could focus on personal ways of thinking, perceiving and representing place. Small-scale scenarios such as nation-states or continents may privilege collective forms of cartographic imagination and emphasize geopolitical aspects. At any rate, the four cultural-cartographic methodologies presented in this dissertation may be adjusted to the specific configurations of scale and space.

Although I have worked on the different parts of this dissertation at the same time and not necessarily in the order in which they appear in the written text, the overall structure can be read as a sequence in which each chapter builds upon the previous.

In chapter two I presented some insights into the ways histories and geographies of/in the Cariri are written which led me to the question of how I could get access to regional narratives, hidden maps, and storied places beneath the polished surface of written words that were mainly derived from official documents and not from the region “as it is”. Reading through the literature related to the histories and geographies of the region, I realized that “‘the past’ was a messy assemblage of dates, events, chronologies, and stories and any effort to know it definitely spoke more to the politics of knowing than to knowledge itself” (Flores, 2002, p.ix).

However, the written texts on regional history and geography did not appear to be “messy” at all. Many regional authors presented the “facts” of the past in a chronological order with their respective calendar dates and assembled them as a continuous chain of events without gaps, transforming these “unstructured series ... into seemingly coherent historical narratives” (Zeruvabel, 2003, p.13).

Opposite to these forms of writing, my search was for some of the “texts” and “scripts” of the “minor geographies” of the Cariri, narratives, stories and maps that involve “marginal, minoritarian practices that engage centre as well as periphery” and help “escape [from] the ‘cramped space’ of the major geography of ‘masters’” (Bradshaw & William, 1999, p.251).

At the same time, this chapter also aimed to reintroduce regional geography to the cultural-geographic research agenda. The perception, production, and (re)presentation of regional knowledge, discourses, and identities are potential topics of interest for cultural geographers who too often only focus narrowly on a specific theme and initiate their interpretation before having done a thorough description.²⁵²

I realized that the geographies and histories of the Cariri were mainly based on written records that did not lead to the production of regional images and representations. How could I turn the region into a visual experience? This is what I have discussed in chapter three. My argument was that maps and mappings in their broadest sense could serve as catalysts in my research and help me uncover details and unfold stories, taking into account that cartography with its multiple facets of making, reading and representing is still an underexplored resource in cultural-geographic research. In the chapter, I show that new and refreshing mapping perspectives have emerged not only in cartography, but also in the social sciences and the humanities and that these alternative ways of thinking and seeing have resulted in innovative cartographic philosophies and epistemologies that are not restricted to the map as material artifact, but also make use of it as a powerful metaphor. Combining the politics and poetics of cartography, I have worked out a methodological framework for these cultural cartographies that consist of four different approaches that emphasize to a different extent the reading or making of

²⁵² See Peirce Lewis’s (1985) plea for more vivid descriptions in human geography that should be “appealing esthetically as well as intellectually” (p.465).

maps and mappings. I have presented these methodologies in the subsequent four chapters. With this framework I want to show how we can use maps and mappings as a diversified set of cartographic research tools.

Chapter four dealt with the reading of cartographic representations and the (hi)stories and processes beyond the landscapes on the paper. The maps served as final imprints that I traced back in time and space (in some cases not very successfully) and that gave me access to background stories, regional texts and contexts, and the “social lives” of human beings in the Cariri region. The result of this was not a “complete” cartographic account from the early times of mapmaking to the present, but a stimulus to engage with the cartographies of the region and establish a *dialogue with maps*, not only in a strictly academic sense, but also as a personal quest.²⁵³ Using Miles Harvey’s words, “what obsessed me about them was never the scientific utility. I did not look on them as mere tools but as mysterious and almost sentient beings. Maps spoke to me. They still do” (Harvey, 2000, p.37). My study of the cartographic history of the Cariri region served as a visual history that did not only speak to me, but motivated me to make the maps “speak” to others. The maps I selected – and I could have easily chosen at least a dozen of other examples – were triggers, our gateways to get access to the stories “under the surface”. At the same time, this chapter was an example of how to “denaturalize” histories of cartography and to

uncover paths not taken; to re-place the ‘monolithic textbook chronicles’ with a history enlivened by multiple actors (people, technological objects and institutional assemblages) and competing claims to truth, accuracy and use value (Pickles, 2004, p.70).

²⁵³ My use of the term dialogue refers to the *Dialogic Imagination* by the Russian literary critic Mikhail Bakhtin (1981). In my study, dialogue means an engagement and communication with different cartographic perspectives that create a “map” of multiple voices. For a more detailed discussion of the use of Bakhtin’s ideas in geography, see Folch-Serra (1990) and Holloway & Kneale (2000).

Although the maps opened up events, incidents, and “accidents” to me, I remained separated from the processes. The maps were already “there” and worked as mere filters through which I could obtain details of regional histories and geographies. For this reason, I opted for a completely different kind of reading in chapter five. I “extracted” mental maps from the minds of undergraduate students and coded and interpreted them. I used the mental maps in order to establish a *dialogue through maps*. The students gave me insights into their regional knowledge and cartographic culture by organizing and expressing their ideas of the Cariri visually on sheets of paper. The more than 350 mental maps revealed a diversified universe of mapping strategies, techniques, and ideas ranging from very simple concept and location maps with sketchy outlines to detailed road maps and complex pictorial narratives.

Within this perspective, I argue that mental maps should have their place in cultural-geographic research. They are, in fact, mappings that are based on cultural conceptions of space, both individual and collective, beyond the traditional behaviorist approaches in geography and just as important as other cultural-geographic research strategies. In addition to this, studying mental maps is not only an act of reading representations, but also of *producing* them.

However, this dialogue through maps mainly revealed re-presentations or re-presentations (Pineiro, 1998) of the region. The short mapmaking exercise did not provide me with sufficient clues about how each individual maps the Cariri and why the results were so different. The mental maps spoke to me, but they only provided me with an incomplete picture of how people think about the region and its forms of representation. In order to find out more about these cartographic and regional worldviews, I had to ask the mapmakers directly. Simply put, "if you want to know how people understand their world and lives, why not talk with them" (Kvale & Brinkmann, 2009, p.xvii)?

Chapter six was an approach to these individual mapping processes. I interviewed scholars and intellectuals from the region who shared their regional knowledge with me and agreed to draw and discuss their maps of the Cariri and initiate a *dialogue about maps*. This approach is perhaps less “cartographic” than the other three methodologies because of its stronger allusion to metaphorical mappings. Even so, my intention was to direct my interviewees’ attention to maps and mapmaking.²⁵⁴ Some of them readily provided me with their mappings while others gave preference to other “maps” such as their life histories, local and regional politics, or personal experiences. As a result of this, I was able to collect different cartographies, not necessarily representational, but conceptual, spiritual, and performative. For example, Felisberto’s map of the Cariri indicated spots of “cosmic energy” on the Araripe plateau rather than concrete geographical locations whereas Teresa told me about regional myths that she linked to real places (e.g. a mysterious river under the plateau that emerges on Good Friday). Joaquim used his (conceptual) map as a discourse in favor of regional autonomy and a critique of the centralized political structures in the state. It is important to point out that these creative and alternative ways of seeing and mapping are not products and processes that belong exclusively to the realm of “traditional non-western societies” as it is still frequently described in cultural studies of cartography that implicitly or even explicitly differentiate between “our” and “their” society. In other words, we do not have to spend a long time in a Moroccan village to learn about embodied maps (Pandolfo, 1989), go to the Andaman Islands to define space by movement (Pandya, 1990), or ramble the Australian outback to record the performance of

²⁵⁴ My impression is that cultural-geographic studies that include interviews sometimes lack a stronger spatial dimension that would distinguish geography from other disciplines. For me, having conversations about maps, mapmaking, and mappings was a kind of “guarantee” to maintain a geographical character in my research... and make me feel like a geographer.

songlines (Chatwin, 1987). There is a wide range of different cartographies within our own society – despite the dominant power, impact and influence of scientific cartography.²⁵⁵

A key moment in my research was my conversation with one of my interviewees (*Clara*) during which I literally became “disoriented”. I felt that as a researcher I should not restrict myself to the interpretation of maps and mappings by others. I had to reveal my own (sometimes fallacious) ways of thinking, perceiving and representing space and place. In chapter seven I used a twofold approach to make maps of the Cariri region. The first one was an exercise of “translation” that consisted of the reading between the lines of a travel diary written by the Brazilian botanist Francisco Freire Alemão in the middle of the nineteenth century. Based on these texts, I (carto)graphically (re)produced some aspects of his musings and descriptions and tried to connect images to words. The second strategy included my own direct observations from my fieldtrip that served as material for mapping out my “cartographic self” (Lilley, 2000). I created my *maps and mappings through a dialogue* with texts, contexts, the regional landscape... and maps and what they represented. In addition to this, I used a photographic documentation.

Table 8.1 summarizes and compares these four cultural-cartographic approaches that I applied in my research, including their main features, limits and respective methods. As I mentioned in chapter 3, these strategies can overlap or complete each other.

²⁵⁵ Of course, this is a contestable provocation, taking into account that I carried out my research in a rather “traditional” society in Northeast Brazil. Far from making a plea for “going native” or maintaining an “objective distance”, I tried to take into account any kind of mapping, be it scientific or popular, geometric or without scale, material or ephemeral.

Table 8.1: Comparison of the four cultural-cartographic methodologies

Approach	Principal methods	Main features	Limits
Map reading	<ul style="list-style-type: none"> •visual interpretation of maps (“reading between the lines”) •study of the map contexts (“social life of maps”) 	<ul style="list-style-type: none"> •dialogue with maps •historical dimension is emphasized •establishes link between product and processes, map texts and contexts •detailed archival research to fill gaps and reveal “stories” 	<ul style="list-style-type: none"> •researcher remains separated from the “world on the paper” •chronological, “evolutionary” order of cartographic history
Reading of mappings	<ul style="list-style-type: none"> •data collection of empirical visual material •coding and interpretation of mental maps 	<ul style="list-style-type: none"> •dialogue through maps •partial analysis of regional cartographic culture •inclusion of “non-representational” cartographies and performances 	<ul style="list-style-type: none"> •interpretation based on maps and not on people •much speculation about mapping behavior •conditions and settings for map exercise were variable
Mappings	<ul style="list-style-type: none"> •interviews with emphasis on geographical knowledge and the making of mental maps •map biographies 	<ul style="list-style-type: none"> •dialogue about maps •drawing and reading of mental maps as part of interview 	<ul style="list-style-type: none"> •focus on regional knowledge and life history rather than on maps and mappings
Mapmaking	<ul style="list-style-type: none"> •data collection based on direct observations and secondary sources •production of maps, graphics; and photos 	<ul style="list-style-type: none"> •maps and mappings through dialogue •researcher as active and subjective “mapper” of space •performance 	<ul style="list-style-type: none"> •personal mapping and mapmaking skills •infinite number of mapping possibilities

How can I “map” my own findings? Figure 8.1 is a simple (and incomplete) concept map²⁵⁶ that shows the “inputs” and “outputs” in my study. The arrows that point to the Cariri region refer to the principal strategies that I used in order to obtain empirical details (“mapping in practice”, interviews, interpretation, and mental-map drawings), whereas the arrows that go

²⁵⁶ For the construction of concept maps as “structured conceptualization process”, see Trochim (1989)

into the opposite direction show the data that I obtained through the four mapping and mapmaking approaches.

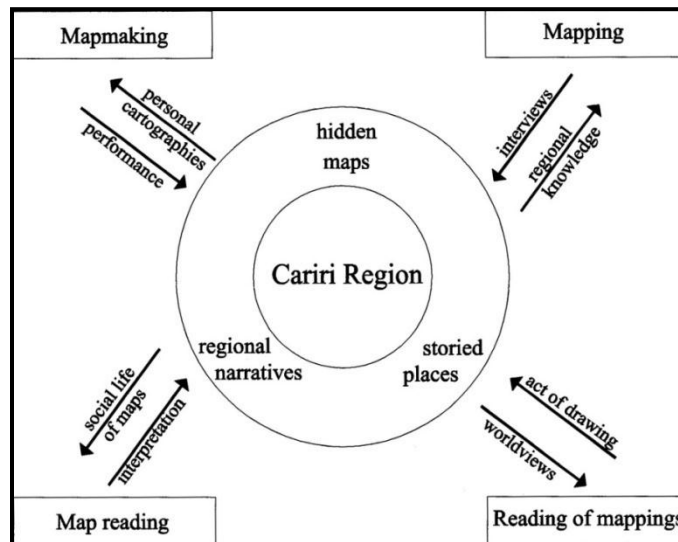


Figure 8.1: A concept map with the four cultural-cartographic approaches

These cultural-cartographies allowed me to get access to some of the regional narratives, hidden maps, and storied places of the Cariri. I conceived my research as a kind of a role play in which my challenge was to slip into the role of four different cartographic “characters” that required different cartographic, intellectual and personal skills. For example, the reading between the lines of maps in chapter four was essentially bibliographic and archival research whereas my interviews in chapter six followed the common steps of qualitative data analysis from recording and transcribing the interviews to the coding of information and the writing-up of the results. With the conclusion of my fieldwork, I have gained the necessary distance to my findings which helps me to critically re-read my ways of doing cultural geography. Evaluating my data collection, I would make considerable changes in my research strategies, for example, a more standardized and less improvised proceeding in my mental map exercise, interviews with a stronger focus on maps and map biographies, and more maps conceived by my own mind and drawn with my own hands.

What does this all mean for cultural geographic research? I presented and tested four different methodologies for the study of maps and culture that could be used – separately or as a complete framework – in a wide range of cultural-geographic research topics such as identity, sense of place, literary geography, or mobility. For example, post-colonial geographers could use cartographic histories to obtain access to hidden narratives and important episodes in the formation and change of a territory, region, or country. Humanist geographers may use mental maps to grasp the “dynamism of lifeworld” in a place (Buttimer, 1976). Cultural geographers interested in the relations between fiction and space could “map” literary landscapes by asking writers about their conceptions of space and how they project them in their novels, and by interviewing readers about how they relate fiction to real space. Studies on mobility may find it challenging to simultaneously activate the body and the mind and read and make maps whilst hiking, cycling, driving, or flying.

Besides its scientific and academic aspects, this four-pronged methodology may serve as a tool for regional groups and individuals to trigger regional awareness, reclaim territories, or even craft forms of regional identity that previously had not been recognized or taken into consideration in the region. In the case of the Cariri region, a wide range of social and political actors such as regional activists, ethnic minorities, politicians, regional planners and developers, the tourism industry, and all those interested in promoting regional unity and coherence could make use of these cartographic strategies in order to create a stronger visual image of the Cariri and stress its importance as a center of popular culture, paleontological heritage, and economic development in Brazil.²⁵⁷ However, it should be mentioned that the maps and mappings from these cultural cartographies may be the results of specific aims and motivations and could be

²⁵⁷ Examples of this form of visual culture are Richard Francaviglia’s (1995) study of the shape of Texas which is a powerful symbol of Texan identity, and Craig Colten’s research on places and business names in Illinois associated with president Lincoln (Colten, 1997).

driven by political, economic, and cultural forces that could lead to a counter-mapping or even a counter-counter-mapping of the region (Wood, 2010). For example, an activist group in defense of the Afro-Brazilian heritage in the Cariri could trace place names that are either of African origin or relate to slavery (e.g. farms from the nineteenth century) and link these historical records to the oral history of the present-day population with African roots. Conversely, politicians might employ maps of settlements, culture, and economy for their own purposes, building their regionalist discourse on these cartographic “facts”, and (over)emphasizing the regional identity to attract more regionally-oriented voters, or even tourist dollars.

The complete cultural-cartographic framework (which is an open-ended set of research tools and not a closed script) could also be used to access specific study areas in different scales and with different characteristics, from territories with fixed boundaries (countries, states, islands, etc.) to less bounded or unbounded places such as streets or squares that are frequently stages for public protest movements, monuments and other meaningful locations with their peculiar spatial configurations, or ethnically segregated neighborhoods in which politics, narratives, and race are interwoven. There is an infinite number of spaces and places for which maps and mappings could be produced and read.

The Cariri region in Northeast Brazil represented a good testing area for my framework, also in the sense of challenging the dominant cartographic conventions “that easily lull us into imagining a world of clearly bounded, non-overlapping, one-dimensional social units” (Lewis, 1991, p.606). Regions from within a more recent cultural perspective are geographically as ill-defined and malleable as other cultural space units such as place or landscape. My mapping strategies showed the region as a complex universe of worldviews, landscapes, images, and

practices that are not static, but in a process of constant becoming and that correspond to a regional boundedness rather than to regional boundaries (Painter, 2008, p.346-347).

Concluding these cultural cartographies, I would like to stress three aspects of my study that refer to the use of metaphors, to one of the most nagging questions in the current debates on culture and space (what is representational or not), and to the importance of maps in cultural geography and society in general.

As for the first point, the literal and metaphorical use of maps, cultural geographers excessively use the map metaphor without reflecting much about its changing meanings.²⁵⁸ In other words, the metaphor is frequently employed to indicate that the researchers have complete control of their research findings that they “unfold”, “plot”, or “chart”. Maps are still taken as the “view from above” that allow the researchers to see and synthesize their results. However, this conception of maps does not consider maps as social constructions whose projections, scales and symbols are not taken-for-granted parameters, but based on human (inter)action and decision-making (Santos, 1987). In my study (especially chapters 3 and 6) I pointed out that these metaphors could be more useful for cultural geographers when they are updated or even upgraded to some of the more recent epistemological and ontological debates in cartography in which the discipline is seen as processual rather than representational, and maps are considered as “transitory and fleeting” and “constantly in a state of becoming; constantly being remade” (Dodge & Kitchin, 2007, p.331 and 335).

The Australian historian of scientific knowledge David Turnbull (2007, p.146) affirms that maps and mappings were the “the dominant trope for knowledge, its management and

²⁵⁸ See the most recent progress report in cultural geography in which map metaphors are used in a non-cartographic way (Tolia-Kelly, 2010). The author mentions the “edges of our current moral map of research endeavour” (p.360) and “worldly geographies that are within, that are at the edges, and that are shadows off the edge of the map” (p.364).

assemblage” and “the essential prerequisite for understanding the world”. However, the epistemological debates in cartography during the last three decades have led to a diversification of the intellectual landscapes and a process that John Pickles (2004) – somewhat awkwardly – defines as “de-ontologizing cartographies”:

That is, it is about both the alternatives to Enlightenment cartography (e.g. post-modern cartographies) *and* it is about the *dissemination of cartographies*; a post-representational account of actually existing cartographies. *It is not only that the instrumental logics and representational epistemologies of universalist cartography are to be countered by new mapping forms, but that the discursive practices of modernist cartography are to be deconstructed and read differently* (Pickles, 2004, p.184, original emphasis).

I second this plea for critical cartographies and different ways of thinking space that take into account “multiple varieties of spatiality, help “understand complex interactions between widely variable components on different scales”, and “adopt a form of mapping which is itself emergent and *which can be held in dialogical tension with the standard representationalist forms*. Such a form, I suggest, has to be performative in all its multiple dimensions (Turnbull, 2007, p.147, my emphasis).

This observation leads to my second concluding comment. Recent debates have shown a certain inquietude about non-representational theory in cultural geography (Lorimer, 2005, 2007, 2008), taking into account that “the nonrepresentational project is entirely, quite avowedly, unmappable. Its own logic of radical revisionism does not permit the old subject-based maps of academe, and thus, any limiting of intellectual ambition” (Lorimer, 2007, p.90). I argue that the non-representational does not necessarily eliminate the representational, especially in the cases when the map is used in its metaphorical sense. For example, Steve Pile and Nigel Thrift (1995) nicely apply the map metaphor to the geographical debates on body, the self, the person, identity, and the subject:

The human subject is difficult to map for numerous reasons. There is the difficulty of mapping something that does not have precise boundaries. There is the difficulty of mapping something that cannot be counted as singular but only as a mass of different and sometimes conflicting subject positions. There is the difficulty of mapping something that is always on the move, culturally, and in fact. There is the difficulty of mapping something that is only partially locatable in time-space. Then, finally, there is the difficulty of deploying the representational metaphor of mapping with its history of subordination to an Enlightenment logic in which everything can be surveyed and pinned down (Pile & Thrift, 1995, p.1).

These mapping difficulties are not restricted to the cartographies of the human subject, but also refer to “real” maps and mappings. In my case study I tried to show that space and place could be like sediments behind maps (chapter 4), derived from the imagination (chapter 5), be a discourse without “precise boundaries” (chapter 6), and be equally “on the move” (chapter 7). Consequently, maps are not conceived only as representations, but also as translations and dialogues that help us to link material culture, discourse and performative ways to comprehend reality. In a broader sense, these cultural cartographies could be a key to the understanding of knowledge and space:

An account which would enable the explanation of materiality, discursivity and performativity of knowledge/space needs to combine narratives, bodies and movement in the linking of people, practices and places. Discursive accounts tend to leave out bodies, material accounts tend to leave out spatiality, and performative accounts to leave out knowledge (Turnbull, 2002, p.135).

This leads me to the last and most important point of my study that should be considered an invitation to reflect about cultural (and cultural-geographic) perspectives in cartography and cartographic perspectives in cultural geography. In a recent article, Chris Perkins (2008) asserted that a “scientific approach to mapping” is only “one of many ways of increasing our understanding of how and why maps are used” (Perkins, 2008, p.158). Besides this investigation from the “inside” of the cartographic discipline, there is a need to study cultures of map use with the help of research tools from social science and the humanities, including cultural geography. I

argue that this endeavor must go *beyond the use of maps* and include the *processes of mapmaking and mapping*. Cultural geographers should be able to map and represent their results, not only in words, but also in visual ways:

To confine one's work to verbal description is cumbersome and ultimately constraining. Geographers should take advantage of their position within academia to develop rather than disparage cartographic understanding; that cartography has so far lagged behind social theory should be taken as a challenge, rather than cavalierly used as an excuse to neglect the demanding task of map construction (Lewis, 1991, p.621).

Denis Wood's critique of professional cartography is even more virulent when he makes a plea to take the map back into our hands and make it serve our own purposes:

[A]s long I've been interested in maps I've been enervated, enervated and pissed by the presumption of cartographic professionals that they alone held the keys that unlocked the power of the map. I've wanted to believe that the ability to make maps was like the ability to write, one that came with being human in a society that used maps to communicate, and I resented the posture of the profession that the ability to make maps was one that came only with exhaustive training at the hands of professional cartographers. Or more recently with software they'd cobbled together (Wood, 2010, p.156).

Mapping and mapmaking in their most basic meanings are essential tools for cultural geographers, especially in the age of geographic information science that allows us to process vast quantities of data, but at the same time makes us lose the idea of how the human brain maps reality, even more when the mapping process is being substituted by mouse-clickable algorithms. For this reason, I limited my studies to "grassroots cartography" rather than to technologically sophisticated methods of spatial analysis, taking into account that this "back to basics" approach is easily accessible to anyone and does not require hardware, software, and trained personnel to be put into practice.

These methods can be a contribution to the discussion of visual methods and methodologies in cultural geography that goes beyond the traditional ways of seeing:

One can think of other scopic regimes both through specific historic-geographic configurations of spaces of viewing, practices of seeing and ways of presenting but also through thinking about the visual not as detaching and enframing but connective and performative (Crang, 2010, p.222).

The result of these mappings will not be “readerly maps” that aim to create readers for already existing maps, but “writerly maps” that make us see maps as “producing an open series of readings, each of which requires that the reader also be in part author of meaning” (Pickles, 2004, p.174).

The bottom-to-top approach of these cultural cartographies can be a contribution to empower people, groups and places that previously had been left off the map. In his almost classic book *Boundaries of Home*, Doug Aberley (1993) alerts against the cartographic hegemony of specialists and professionals whose mapmaking and mapping activities serve primarily for those in power:

... maps have been appropriated for uses which are more and more sinister. Spewed forth from digital abstraction, they guide the incessant juggernaut development. They divide whole local, regional and continental environments into the absurdity of square efficiency. They aid in attaching legitimacy to a reductionist control that strips with the web of life from the experience of place (Aberley, 1993, p.1-2)

In order to counteract this cartographic totalitarianism, Aberley makes a call to regain our ability to “conceptualize, make, and use images of places” (Aberley, 1993, p.1) and the “language of describing time and space ... so that we all can feel comfortable with a pencil in hand, tracing the aspirations that define self, family, and community” (Aberley, 1993, p.6).

An example for these locally-based cartographies is Grasseni’s (2004) study of a local initiative in a village in the Italian Alps to produce a hiking map for tourists based on the locals’ memory and perception of the regional landscape in the past and the present. Grasseni draws the

conclusion that the map did not eliminate differences in the community, but rather highlighted them, whereas practices of locality shaped identities:

Multiple perspectives emerged, according to which local identity and visions of the landscape are informed in different ways, anticipating different futures for the valley. The making of the map, which should represent the valley to the outside world, sharpened difference between the views that locals have ‘from within’ (Grasseni, 2004, p.716).

Another example is Jeffrey Warren’s (2010) recent action-research for community mapping through the use of low-budget technology. Warren employs balloons and kites for the collection of aerial photos in several informal settlements in Lima, Peru. His “grassroots mapping” can be considered an educational activity that serves to democratize mapmaking and stimulate the participation of the population in the creation of new data about their neighborhood.

Matthew Sparke’s (1998) frequently quoted article about cartography, nation-state and post-colonial theory transfers these activist cartographies to legal and territorial issues. He presents two case studies in which the geographical knowledge of place and space by indigenous Canadian nations was translated into the conventions of Western cartography in order to “outline their [indigenous] sovereignty in a way the Canadian court might understand” (Sparke, 1998, p.648) and to identify “accoutrements of Canadian colonialism on native land” (p.648) such as pipeline, electricity lines, trap lines, property lines, clear-cuts, and logging roads.

These three examples show the power of maps and images as political tools. Simply put, “we have to map – there is no alternative – you are either on the map or off. But while we may not have a choice about whether to map, we can document, record, remember, and honor indigenous [and regional] conceptions of space” (Fox (2002, p.76).

In the case of my study area, the Cariri in Northeast Brazil, the region as it appeared at first glance was dominated by a rather imageless discourse that suppressed the manifestation of a regional identity beyond the regional stereotypes. Through my four cultural cartographic strategies I was able to unearth a wide array of ways in which people identify and represent themselves in their own regional context, and show how the region reveals itself to them. The deeper understanding of this being-in-the-region²⁵⁹ can be a considerable contribution to current debates on regional politics, economy, tourism and the consolidation of social movements in the Cariri. Mapping and mapmaking can literally put the region on the map and become a powerful political tool, both for regional activism and for political projects to attract financial support from the state government and federal institutions, and/or private investors.

A stronger cartographic presence of the Cariri region can help consolidate regional claims and unite the regional population to actively shape a regional identity, whereas the

maps act as tools in the direct intervention in problematic situations, transitioning from the (still important) discursive products of maps-as-information to their use as informational weapons in a direct engagement in ‘politics and power’ (Warren, 2010, p.27).

In my study, I pointed out the uniqueness of the region, but did not present in-depth insights into its peculiarities that could be analyzed with the help of historical maps, mental maps, interviews, mappings, and mapmaking. Especially two regionally important topics deserve a cultural-cartographic interpretation in future research projects: First, the pilgrimages to the city of Juazeiro do Norte in honor of Padre Cícero which attract more than a million of pilgrims

²⁵⁹ This is an allusion to Miles Richardson’s (1982) reflections on the dynamics of Spanish American culture and social practice. Richardson affirms that cultures are

composed of multiple realities, counterposed against one another like semantic domains, ... in no sense a fixed entity – certainly not something you could capture in a butterfly net – but a pattern whose very existence shifts with each new arrangement among the social realities that compose it (Richardson, 1982, p.433).

(mainly from the Brazilian Northeast) every year and entail a complex web of memories, movement in space, and performativity. Second, the Cariri region as a unique paleontological locale due to the extraordinary state of preservation of its fossilized flora and fauna. This research could involve the mapping of sites with a high number of fossils, local oral history about how the population conceives this geological heritage, and the international networks of scientific studies and illegal exportation of pieces for museums and private collectors. I only mentioned these two examples for potential projects, but there are many more regional narratives, hidden maps, and storied places in the Cariri region, waiting to be explored.

In conclusion, my cultural cartographies did not just map the known world, but also served as tools for discovery that invite further engagement in the region and rethink maps and mappings as forms of empowerment in non-isolated communities.²⁶⁰

Cultural geographers and cartographers – be they academics, activists, writers, factory workers, or any person or group interested in the relations between space, culture and maps– will have countless maps to explore and an equally infinite number of mappings to perform, as long as they initiate a dialogue with these literal and metaphorical cartographies. These are not only valid for the Cariri region in Northeast Brazil, but also for any other space or place.

²⁶⁰ For a wide range of examples for community mapping, map art, and democratized map projects, see Perkins (2007) and Wood (2010).

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Appendix I: Glossary of Regional Terms

Agreste

Transition zone between the fertile coastal strip (*zona da mata*) and the dry backlands (*sertão*). The main characteristic of the *agreste* is its diversity of landscapes so that it can be considered “almost the Northeast in miniature, with very dry and very humid areas” (Andrade, 1980, p.16).

Araripe plateau

Mesozoic tablelands in Northeast Brazil in the borderlands between the states of Ceará and Pernambuco that rise up to more than 3,000 feet above sea level. In the text, two synonyms are used: *Chapadado Araripe* and Araripe tablelands.

Bagaco

Bagasse in English. The residual fibers of the sugarcane stalks after the extraction of the juice. It is frequently used in the *engenho* as biofuel.

Bahia

Largest state in Northeast Brazil, south of the Cariri region.

Bandeirante

Originally a Brazilian-born Portuguese colonial scout who took part in expeditions to the backlands in search for slaves, precious stones and metals, predominantly in the seventeenth and eighteenth century.

Brejo

A more humid and fertile area in the middle of the dry backlands.

Caatinga

Literally “white forest” in indigenous language. Dry and thorny shrubland vegetation that is typical of the *sertão* in Northeast Brazil.

Caboclo

Originally used to denominate a person of mixed ancestry (indigenous, European and/or African). In a broader sense, the term refers to the poor rural population in the Amazon and Northeast (Levine, 1979, p.39).

Cangaceiro

Bandit who roamed the backlands of Northeast Brazil in the early twentieth century.

Capitania

Captaincy in English. Lands in Brazil given to individuals, frequently noblemen, by the Portuguese crown in early colonial times.

Cariri

“Region” in the south of the state of Ceará and object of study in this dissertation and named after several indigenous groups in Northeast Brazil. Frequently named Cariris Novos (new Cariris) in order to differentiate the region with the same name in the state of *Paraíba* (Cariri Velhos).

Carrasco

Literally hangman. Shrub vegetation in the dry backlands of Northeast Brazil that is generally less penetrable than the *caatinga*.

Casa de farinha

Literally “flour house”. A roofed shelter where manioc roots are shredded and then roasted in a large pan to produce manioc flour (*farinha*).

Ceará

State in Northeast Brazil. The Cariri region is located in its southern part.

Comarca

Judicial district in Brazil.

Comissão Científica de Exploração

First exclusively Brazilian scientific expedition to the backlands of Northeast Brazil between 1859 and 1861.

Coronelismo

Patron-client system in Brazil under which a local influential land owner (“coronel”, frequently a commissioned title) concedes favors in return for loyalty and unconditional support.

CRAJUBAR

Acronym for Crato, Juazeiro do Norte and Barbalha – the three major towns and political and economic poles in the Cariri region with a total population of over 400,000.

Engenho

Land property with a sugarcane plantation and a mill where sugar is refined. The term refers mainly to the period from the early colonial times to the late nineteenth century when industrialized sugar refineries began to dominate the production (Levine, 1979, p.82).

Jaguaribe River

Largest river in the state of Ceará whose branches pass through the Cariri region.

Literatura de cordel

Literally literature on a string. Low-cost pamphlets, generally with a woodcut print on the cover, that deal with everyday situations, moral issues, politics, and popular culture.

Mandacaru

Characteristic cactus (*Cereus jamacaru*) in the dry landscapes of Northeast Brazil whose height can reach more than 20 feet.

Minas Gerais

Literally “general mines”. State in the Brazilian Southeast. Its northernmost part has characteristics on the Northeast and is considered part of the *polygon of drought*.

Municipality

There are no counties or parishes in Brazil. *Municípios* = municipalities are the common administrative units and generally contain a “seat” (center of commerce and services) and districts.

Padre Cícero

Popular catholic “saint”. Father Cícero Romão Batista (1844-1934) was a native of Crato and long-time cleric in Juazeiro do Norte. A supposed miracle (a sacramental bread in the mouth of a nun transformed itself into blood in several occasions) turned him into an unofficial saint who attracts more than 2 million pilgrims to Juazeiro do Norte every year.

Paraíba

State in Northeast Brazil that borders on the eastern part of the Cariri region.

Pernambuco

State in Northeast Brazil that borders on the southern part of the Cariri region and the Araripe plateau.

Piauí

State in Northeast Brazil that borders on the western part of the Cariri region.

Rio Grande do Norte

State in Northeast Brazil.

Pau-de-arara

Literally “parrot’s perch”. A converted truck for passenger transportation with low wooden benches, common in Northeast Brazil.

Polygon of drought

Parts of Northeast Brazil which temporarily suffer from the impact of long and accentuated dry periods.

Rapadura

Brown sugar in the form of bricks.

Sertão

From the Portuguese *desertão* = big desert. The dry backlands in Northeast Brazil that have inspired many movies and literary writings. The typical vegetation is the *caatinga*; the people who live there are called *sertanejos*.

Sesmaria

Land grants given to individuals by the Portuguese Crown in colonial Brazil.

Taipa

Construction material for house wall that consists of a mix of earth, clay, sand, and gravel which is used to fill in a structure of pieces of wood that form the walls.

Vaqueiro

Characteristic “cowboy” and cattle-herder in the Brazilian backlands.

Zona da Mata

Narrow coastal strip in Northeast Brazil with fertile soils, traditionally used for sugarcane agriculture. In colonial times, the *zona da mata* was the core of the Northeast Brazilian plantation society.

Appendix II:

Interviews in the Cariri Region, June 08 – July 09, 2009

	Interviewee (pseudonym)	Date/hour	Duration	Place of interview
01	Joaquim	June 08/5:15pm	32'25''	Residence
02	Nestor	June 09/11:15am	31'09''	Residence
03	Vicente	June 09/4:00pm	32'39''	Office
04	Alberto	June 09/6:00pm	8'49'' part 1 18'58'' part 2	Residence
05	Felisberto	June 10/2:00pm	34'30''	Residence
06	Guilherme	June 12/8:30am	33'16''	Office
07	Maria*	June 12/9:40am	ca. 30 minutes	Residence
08	Carlos*	June 12/3:10pm	ca. 15 minutes	Residence
09	Jandira	June 12/4:10pm	44'27''	Residence
10	Alfredo	June 15/4:10pm	25'52''	Work place
11	Anderson	June 16/8:10am	56'36''	Residence
12	Clara	June 16/10:10am	1h07'22''	Residence
13	Fernando	June 23/9:30am	53'30''	Residence
14	Arlete do Araripe	June 23/3:30pm	1h04'37''	Residence
15	Roger	June 24/3:45pm	36'03''	Local bar
16	Francisco	June 25/10:15am	1h08'09'' part 1 16'56'' part 2	Residence
17	Miguel	June 29/3:00pm	1h16'23''	Residence
18	Teresa	July 01/9:30am	1h07'41''	Residence
19	Wellington	July 01/5:30pm	1h10'07'' part 1 9'46'' part 2	Residence
20	Humberto	July 02/8:45am	39'32''	Residence
21	Hermano	July 03/6:00pm	36'49''	Residence
22	Pedro and Paulo	July 05/9:00am	34'05''	Hike on Araripe Plateau
23	Sandra	July 07/8:30pm	48'07''	Residence
24	Cícero	July 09/10:45am	24'53''	Room at university

* non-recorded interview

Vita

Jörn Seemann was born in Hamburg (Germany), on May Day 1968 and grew up in the nearby *Altes Land*, one of the largest contiguous fruit tree areas in Europe. After two years as a volunteer in the German Air Force, he decided to “study the Earth” and enrolled in the geography program at Universität Hamburg from which he received a master’s degree in geography in 1994. In the end of the same year he moved to Brazil where he has been teaching cartography to undergraduate students since 1998. He entered the doctoral program in geography at Louisiana State University in August 2006 and is looking forward to receiving his degree in December 2010.