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Horses for courses. The roles of IPE and Global Public Policy in global energy research

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ABSTRACT

Although IPE and GPP overlap conceptionally and empirically, there is a case for keeping GPP and IPE analytically distinct. To simplify: GPP tells us why we need international regimes for energy, while IPE tells us why we only have incomplete ones. Although many scholars draw on both sets of literatures, the two approaches to the study of energy market, regulation and politics entail asking different types of questions based on distinct theories and assumptions. The central propositions in this article are that i) in a rapidly changing world of energy scholars from both camps need to be aware of and open to insights from the other school; ii) that the distinction between market-focused liberal scholars on one hand and security-oriented or realist scholars on the other is increasingly important; and iii) that although IPE and GPP scholars can fruitfully accommodate insights from each others literature, the two approaches to the study of energy policy are best valued by their own analytical contribution – even as we grapple with new, cross-cutting issues such as the geopolitics and geo-economics of global energy transitions.

KEYWORDS

Global Public Policy;
international Political
Economy; energy

Introduction

The first two decades of the new millennium saw dramatic changes to energy markets, energy policy and energy regimes. The oil price went from below 30 USD per barrel to above the 147 mark, and back again. The US became a prime oil and gas producer, ending dependence woes on the Middle East supplies. The oil world stopped worrying about ‘peak oil’, while new terms like ‘peak demand’, ‘unburnable carbon’ and ‘stranded assets’ came to dominate the energy headlines in the financial press. Saudi Arabia switched from stabilizing prices to maximizing its global market share, before nudging Russia to work with the oil producer states’ cartel in the OPEC+ group. The European Union integrated its fragmented gas market, built new pipelines and facilities for import of liquefied

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natural gas (LNG), and forced Russia's export monopolist Gazprom to play by its rules. Meanwhile Russia's annexation of the Crimea pushed energy security to the top of the EU's security agenda, prompted US and EU sanctions, and accelerated Russia's quest for increased energy trade with China. But most importantly, politicians, regulators, companies, and voters across the world stopped worrying about a shortage of fossil fuels and started worrying about what would happen if we consumed it all. Climate change became the single biggest global energy issue – the biggest negative externality the world has ever faced.

Against this backdrop, international political economy (IPE) began to 'return home' to energy policy (Hancock & Vivoda, 2014). New versions of old questions included the looming impact of climate change policies on rentier state revenues (Manley, Cust, & Cecchinato, 2017; van de Graaf & Bradshaw, 2018) and the geopolitics of renewables (Bazilian, Bradshaw, Gabriel, Goldthau, & Westphal, 2020; Scholten, 2018b). To be sure, energy was an important issue in IPE when the global oil trade was controlled by the Seven Sisters cartel of western oil companies (until the 1960s) and the OPEC producer country cartel (in the 1970s and early 1980s). But a long liberal era began with the 1986 oil price counter-shock, and was extended by the collapse of communism. For a quarter of a century, the free trade 'Washington consensus' rendered fossil fuels less interesting for IPE scholars. This only began to change after the turn of the century, with the emergence of China as a substantial player in the global energy market, the increasing assertiveness of Russia as the oil price rose above the 100-Dollar mark, and the unprecedented surge of US shale oil and gas output. Coupled with an accelerated global energy transition, US energy independence (and four years of 'America First' foreign policy), Russian geopolitics, and Chinese geo-economics, this raised new normative questions about stability, justice, and power distribution in a low carbon economy. As for the latter, an entirely new field of scholarly inquiry opened up (Newell, 2019). What had long seemed like a mere matter of managing global commodities markets now *de nouveau* merited questions close to the heart of International Political Economy.

At the same time, 'classic' (global) public policy (GPP) thinking made a foray into energy research. Global energy policy became a well-established field of scholarly inquiry (Goldthau, 2013; Karlsson-Vinkhuyzen, Jollands, & Staudt, 2012). Here oil and gas are analyzed as mixed goods, i.e. goods that are primarily private in nature (that is, rival in consumption and excludable in terms of access), but that have important public goods elements. Transit infrastructure and spare capacity (whether pipelines or safe sea-lanes, or stored oil and gas reserves) have characteristics of classical public goods: they are subject to free-rider problems and potential undersupply unless the state (or international regimes) intervene to correct market failures. In addition, the rise of an increasingly mercantilist China, Russia's attempts to link foreign affairs and gas exports, and Trump's economic nationalist approach to oil and LNG markets increased the salience of oil and gas as strategic goods. Much of the debate about energy security is based on the notion that failure in energy supply is not simply about a failure in public goods provision; it is a type a failure that has important security implications and ought to be of strategic concern to vulnerable states. Debates about reshoring manufacturing in strategic sectors, including the renewable energy sector, drive home the point that low-carbon technology has now become as important to governments as energy commodities (Goldthau & Hughes, 2020).

Our starting point in this article is the observation that GPP tells us why we need international regimes for energy; IPE tells us why we only have incomplete ones. The motivation for most works on global public policy is to analyze energy issues in terms of market or government failure. IPE scholars, in contrast, tend to take as their point of departure states and globalizing markets, and focus on how their mutual interaction shapes political and economic structures. The two write about the same thing, but ask analytically distinct questions and therefore make two distinct sets of contributions. To be sure, some of the literature on ‘global energy governance’ has drawn on both traditions (Florini & Sovacool, 2011; Goldthau & Witte, 2010; Kuzemko, Belyi, Goldthau, & Keating, 2012; Lesage, Van de Graaf, & Westphal, 2010). The main claim in what follows is that both types of questions, and both types of analyses, are necessary, but that the way forward is not to blend them. The present article seeks to make the case why. The rest of this article is organized in four parts. The next section sets out the theoretical foundations of and key analytical concepts in IPE and GPP energy scholarship. Section three explores and compares GPP and IPE in what has long been the core of both types of analyses: trade and regulation. The fourth section turns to the security dimensions of global energy. As it turns out, we argue, in some important ways security-oriented GPP scholars and realist IPE scholars have more in common with each other than with their respective liberal GPP and IPE colleagues. The fifth and final section discusses the common themes and different dynamics in the context of a changing world of energy. The conclusion calls not for fusion of GPP and IPE scholarship, but for clear articulation of the theoretical assumptions and research agendas of each, so that IPE and GPP scholars be in a better position to mutually accommodate insights from their respective literatures.

A new energy world merits new research questions

The world of energy changed dramatically in the first two decades of the Twenty-First century. In the 1990s, after the end of the Cold War and in a context where Francis Fukuyama could herald the ‘end of history’ (at least in terms of ideological struggle), globalization looked set to make global politics more cooperative and shaped by international institutions, global regimes and open trade. By the winter of 2014–2015, however, geopolitics was back with a vengeance. The Ukrainian crisis fueled European concerns over Russia’s use of energy as a tool in international conflicts. China seized the opportunity and inked large bilateral deals with Moscow, pushing its state-owned national oil companies (NOCs) even further into the front row of international energy affairs. Moreover, these events came against the backdrop of a deep structural shift in global oil, where markets turned soft thanks to the US becoming a major oil and gas exporter. In order to capitalize on the ‘energy edge’ (Blackwill & O’Sullivan., 2014) the Trump administration adopted the doctrine of ‘energy dominance’, thus linking market power and foreign policy. Clearly, oil markets went from being international, fungible and more or less transparent commodities markets, to becoming more fragmented and more shaped by (geo)political events again.

Even as natural gas markets have become more internationalized than ever, thanks to liquefaction technology (LNG), it happened against the backdrop of ever fiercer gas geopolitics. Washington threatened German and European companies with sanctions over the Nord Stream 2 project to double Russian’s capacity to pipe gas directly to

Germany across the Baltic Sea, linking this both to trade talks and to the US role in NATO. The European Union itself began debating a new, more internationally assertive, energy policy, both against the backdrop of the Ukraine events and US policies, purposefully reshaping its outlook as a liberal actor in global politics and forging an Energy Union (Andersen, Goldthau, & Sitter, 2017, 2020; Goldthau & Sitter, 2015a), thus securitizing EU gas policy (Boersma & Goldthau, 2017; Judge & Maltby, 2017). At the same time, the Eastern Mediterranean emerged as a geopolitical region on the world energy map thanks to increasingly securitized deep sea gas finds (Christou & Adamides, 2013; Goldthau et al., 2020). With Turkey, Cyprus, and Greece quarreling over their exploration rights, this region made energy headlines in 2020.

Some of these developments prompted global public policy analyses of energy to take more account of IPE debates about geopolitics, power and contested regimes. The combination of Russian mercantilism, China's Belt and Road Initiative, and the United States shifting away from commitment to international rules-based order, prompted calls for new thinking about the 'economic sovereignty' and 'strategic autonomy' in the EU (Leonard, Pisani-Ferry, Ribakova, Shapiro, & Wolff, 2019) and elsewhere. Industrial policy and trade measures emerged as prominent tools to retain and/or build technological capacity and economic resilience, in energy and beyond, to some extent questioning the principle of the global division of labor. Conversely, IPE analyses of energy began to take account of a greater variety of approaches to dealing with energy as a public good, and the role that the enforcers of regulation (including their mandates, tools and values) play in shaping global energy policy. Some scholars called for more 'nexus thinking' to enrich IPE research by looking at the dynamic inter-relationship of energy with other policy areas such as climate change, security and development (Kuzemko, Keating, & Goldthau, 2018).

That said, the questions asked by both strands of scholarly inquiry remain distinct. Take the example of climate change and the threat it poses to the global habitat. In IPE terms, the climate crisis primarily is a matter of politics, markets and global governance. In GPP terms, it is primarily a question of transnational negative externalities and the need for international regulatory regimes. While both strands investigate global regimes, the IPE focus rests on analyzing their emergence and change, and on the interests shaping power structures; whereas GPP puts more emphasis on regimes' effectiveness and efficacy in providing global public goods such as setting standards, and preventing a global public bad, i.e. burning the planet. There are therefore significant complementary but distinct elements that IPE and GPP can bring to bear for the global energy conundrum. Whereas IPE adds important insights into the nexus of production, trade, interdependence and power, and even the role of norms, global public policy adds an analytical focus on the different nature of goods.

The central analytical concepts in the GPP literature on energy are public and private goods in general, and more specifically issues related to various incidents of global market failure. The central analytical concepts in the international political economy of energy are state and market interests, power, and rules for international trade. The clash between the EU and Russia over energy trade, the US adopting a more assertive foreign energy policy, and China's foray into energy diplomacy in Africa have made the subjects studied by IPE scholars imperative for GPP scholars interested in energy markets. Likewise, the increasing problems of fragmented and

Table 1. Prominent security and trade themes in the recent IPE and GPP literature on energy.

Trade	IPE	GPP
Trade in energy commodities and tech requires	Building international regimes	Improving imperfect markets
State's role in energy commodities and tech trade	Managing interdependence	Managing trade in a mixed public-private good
Key policy tools	International/regional regimes for trade, transit and investment	Regime design, compliance and enforcement
Key non-state actors	International Oil/Energy Companies	Independent and/or international Regulatory Agencies
Security		
The nature of energy commodities and tech	A source of power	A strategic good
The trade – security link	Trade of energy commodities and technology are instruments of hard power (mercantilist view) Trade improves security, and vice versa (liberal view)	Trade of energy commodities and technology are detached from high politics/security Transit security, export restrictions or national content provision key challenge for trade
Key Problems	Security of supply (supply shocks and price volatility)	Security of supply (supply shocks and price volatility)
Key policy tools	National champions as foreign policy instruments of the state Market dominance	State aid and industrial policy as public policy instruments of the state Market design and enforcement

transparent oil trade have rendered the public goods aspect of oil markets very salient for IPE scholars. In turn, the fact that liberal market models are increasingly contested highlights the importance of normative concepts for shaping the modes of international energy relations and their underlying governance models. This brings in the notion of (global) policy paradigms which provide for blueprints and shape the strategies of the main players on the global energy policy scene (Andersen, 2009; Goldthau, 2012).

At this point it is important to stress the ‘global’ in political economy and public policy. In essence, national-level public policy builds on the state as the ultimate enforcer in providing public goods, while (national) political economy is preoccupied with the effect of politics on economic policies and welfare (re-)distribution. Absent the ultimate Leviathan, GPP faces the challenge of understanding the generation of policy on a global scale, and IPE is tasked with understanding the dynamics shaping the ‘state-market condominium’ (Underhill, 2000) on international levels. In short, the transnational character of the phenomena IPE and GPP are preoccupied with naturally bring about loosening some of the core assumptions about law, enforcement or administrative capacity. Each, however, attacks this from a different starting point: IPE is rooted in an international relations literature that traditionally centers on the classical question of power and relationships between states – even where politics and economics might be shaped by non-state actors or render states less relevant states; the GPP literature, by contrast, is rooted in debates about the strengths and weaknesses of different policy solutions to specific problems of governance. The many different types of IPE and GPP analyses therefore build on different assumptions about power and institutions (Table 1).

Liberal IPE, GPP and global energy trade: constructing and managing international regimes

Scholars that focus on energy trade as such (rather than on trade mainly as a matter of state strategy and a source of hard power) naturally tend to come closer to the liberal school or paradigm in International Relations than the realist one. In IPE, this is above all a question of the nature of the regimes needed for oil and gas trade, and the state's role in managing this trade. As Table 1 shows, the principal policy tools are international institutions, and the main non-state actors are International Oil Companies (IOCs) that to a large extent operate independently of the government of the states in which they originate. For GPP scholars, a parallel set of questions concern the nature of market failures in oil and gas and the state's role in managing trade in what is after all a mixed public-private good. This includes questions about the provision of public goods such as spare capacity, storage capacity, infrastructure, and safe sea-lanes. The central policy tools of the state are regulation and regulatory enforcement. Consequently, independent regulatory agencies at both the national and international level play a central role.

Liberal IPE energy research starts from the idea that energy flows are global in nature, that the energy is primarily a commodity (though commodities may of course be politicized), and that its production and trade are governed by formal agencies, public and private actors on national, regional, transnational or global scale. This gives rise to a whole set of path-dependent patterns in energy trade that tend to be sticky, even as the world of energy changes (for a comprehensive discussion see Keating, Kuzemko, Belyi, & Goldthau, 2012; Van de Graaf, Sovacool, Ghosh, Kern, & Klare, 2016). Whereas realist IPE (discussed in the next section) tends to focus on the broad theme of 'resource war and peace' and zero-sum games (Klare, 2009), liberal IPE allows for – and indeed normally assumes – positive-sum games in global energy.

The liberal camp of IPE energy research is closely linked to global governance debates. The central subjects include multilateral frameworks for global oil and gas investment, trade, and transit such as the Energy Charter Treaty (Dore and Bauw 1995; Konoplyanik and Wälde 2006; Selivanova, 2012); club structures on markets such as OPEC (producers) or the IEA (consumers) (Claes, 2001; Lesage et al., 2010; Witte & Goldthau, 2009); the patchwork of overlapping international oil and gas regimes (Selivanova, 2010); or efforts of global regime building in producer-consumer cooperation (Harks, 2010; Mitchell, 2005; Wilson, 2015). 'Gs' in their various shapes featured prominently, including the G8 (Lesage, Van de Graaf, & Westphal, 2009), the G20 (Andrews-Speed & Shi, 2015; Downie, 2015; Goldthau, 2017) and their future in a changing energy landscape (Ebinger & Avasarala, 2013).

In addition, new energy-related IPE research agendas include international energy regimes' ability to address global environmental change and energy poverty (Cherp, Jewell, & Goldthau, 2011; Florini & Sovacool, 2011). Here, important contributions have addressed the evolution of international climate governance and its fragmentation (Biermann, Pattberg, & Zelli, 2010; Zelli, Pattberg, Stephan, & van Asselt, 2013; Zelli & van Asselt, 2013), conceptualized climate policy as 'regime complexes' (Keohane & Victor, 2011) while making the case for the just transition from a critical IPE point of view (Newell & Mulvaney, 2013), called for deeper engagement with technology and equity aspects pertaining to climate change (Kuzemko, Lawrence, & Watson, 2019),

pointed to the political, economic and institutional implications of the global energy transition (Newell, 2019) and highlighted the importance of scale in a decarbonizing energy world (Kuzemko, 2019). Still, much of the liberal IPE literature goes on to make a case for ‘the market’ being valuable in itself: that well-functioning markets and transparency are essential elements of good energy governance. This leads some scholars to call for a ‘new energy regime’ (Victor & Yueh, 2010) and a rethink of the ‘rules of the game’ (Goldthau & Witte, 2010). It is in this liberal realm that IPE research on global energy most prominently intersects with GPP scholarship.

While the liberal IPE literature starts from the liberal International Relations theoretical perspectives, the trade-oriented strand of the GPP literature on energy is essentially rooted in a normative neoclassic premise in economics and public policy: markets can fail, and this failure warrants intervention. Important reasons for failure include market imbalances (e.g. cartels) or information asymmetry (e.g. lack of transparency), but in the case of fossil fuels markets negative externalities are a particularly salient problem. Climate change is the most obvious example, but other negative externalities include oil market volatility spilling over to other markets (e.g. feedstock and biofuel) or even causing economic booms and recessions. While molecules per se are private goods as traded and priced on markets, their reliable supply amounts to a public good as it ensures the operation of modern economies and the creation of welfare. A rich literature makes similar claims for areas as diverse as migration, education, health, or climate (Brown, Yamey, & Wamala, 2014; Falkner, 2013; Kaul, Conçeição, Le Goulven, & Mendoza, 2003; Moon, 2009; Mundy, Green, Lingard, & Verger, 2016).

While this literature branches out into various areas that have emerged under the rubric of ‘global policy’ (for a comprehensive discussion see the other contributions to this special issue), the core motivation of the energy agenda here rests on the normative neoclassical model and its implications for framing phenomena of global scale: how to manage and build global markets. Scholars conceptualized global energy in terms of public goods or bads and investigate policy responses (Goldthau, 2013; Karlsson-Vinkhuyzen et al., 2012), casting energy as part of broader policy ‘dilemmas’ (Bradshaw, 2013) or ‘challenges’ (Kuzemko, Keating, & Goldthau, 2015). Recent works investigated emerging energy carriers such hydrogen through the prism of ‘classic’ GPP questions pertaining to oil – transit security, market fragmentation and it becoming subject to industrial strategy (Van de Graaf, Overland, Scholten, & Westphal, 2020).

Realist IPE, GPP and energy security: the strategic aspects of global energy

The realist branch of IPE focuses on the strategic aspects of energy. Oil and gas are commodities that states strive for; and the control of energy resources empowers states. OPEC is the classic example: a club of developing countries using oil as a commodity to project power onto the international stage. Cartelization of the international market allowed OPEC to turn oil wealth into international political power.¹ Indeed, some scholars argued that it is this linking of economics and power with the rise of OPEC that gave rise to IPE as a discipline in first place (Hancock & Vivoda, 2014). The ensuing

¹In fact, it is very much questioned whether OPEC amounts to a cartel at first place – for a classic see (Adelman, 1980).

debate on geo-economics epitomizes this link between trade, economic power and hard power (Claes, Goldthau, & Livingston, 2015; O'Sullivan, 2017; Stulberg, 2005).

Unsurprisingly, realist IPE scholars have coined terms such as 'energy weapon' (Hughes & Long, 2015; Paust & Blaustein, 1974), 'energy superpower' (Rutland, 2008) or 'energy empire' (Hill, 2004). In this context, energy companies – especially state-sponsored national champion or NOCs – tend to be analyzed as instruments of state power. When China started to rely on NOCs to secure supplies, this prompted research into the security implications (Chen & Jaffe, 2007), including shifts in hegemonic power in Africa or elsewhere (Campbell, 2008; Downs, 2007), and how state-owned firms and governments worked in 'symbiotic' relationships (Bilgin, 2011; Chen, 2008). Historically, however, it was private oil companies that developed such 'mercantilist' energy strategies in the first place. With the 1928 Achnacarry Agreement, a group of Western IOCs formed the global Seven Sisters oil cartel, which endured until producer states nationalized their oil assets and formed OPEC. As Daniel Yergin (1991) explored in detail in what would clearly qualify as a 'realist IPE' account of the history of world oil, Western countries did not shy away from using 'their' IOCs to project power. A case in point are the UK's and US' imperial stakes in the Middle East, where Anglo-Persian Oil Company (later BP) and Standard Oil of New Jersey and Socony (the latter two later forming ExxonMobil) played a major role. Contemporary examples include private firms' role in the 'grand game' over Caspian energy reserves (Abdelal, 2013).

Even in the context of the world's efforts to go low-carbon, much thinking is devoted to the 'geopolitics of renewables', and the winners and losers resulting from the global energy transition (Goldthau, Westphal, Bazilian, & Bradshaw, 2019; IRENA, 2019; Scholten, 2018b). A focal point in the debate centers on rare earth elements, crucial ingredients for low-carbon solutions such as wind farms or electric vehicles, and the degree to which governments may use control over their supply to coerce others (Overland, 2019; Smith Stegen, 2015). The global energy transition has also been argued to empower consumers as faltering imports of fossil fuels may give them the upper hand over incumbent producer states (Criekemans, 2018; Scholten, 2018a). Another debate rests on manufacturing capacity and low-carbon technology ownership, strategic assets thanks to which early movers will win an emerging global 'green race' (Fankhauser et al., 2013) while latecomers may lose (Behuria, 2020); and which drive country strategies of capital accumulation in a low-carbon energy future (Lachapelle, MacNeil, & Paterson, 2016).

States' strategic use of regulation is perhaps the best example of areas where IPE and GPP ask distinct but very complementary questions. When states try to project their own regulatory regime onto the international arena, major economic powers influence the global terms of trade. As Luttwak (1990) reminds us, a primary motivation for states seeking to shape global regulatory frameworks is geo-economics: favorable terms of trade facilitate building of economic power. Here GPP analyses of regulatory governance become pertinent to realist IPE scholars, inasmuch as regulation can be used strategically to achieve political policy goals. A case in point is the EU's efforts to deal with Russia's Gazprom by way of using European energy law. Its increasingly targeted use of regulation turns the EU from a 'regulatory power' or 'global regulator' (Bradford, 2016; Young, 2015) into an 'economic power', giving the EU's soft regulatory approach to external energy affairs a 'hard edge' (Goldthau & Sitter, 2015b). In the low-carbon domain, China

is said to use technological standardization as a tool in international power competition, including in the renewable energy domain (Seaman, 2020).

Although GPP analyses of oil and gas primarily rest on theoretical work related to market imperfections and regulatory regimes, many of them directly address contemporary geopolitical challenges. But they do so largely through the lenses of international market failure. It is not so much state-sponsored energy deals or the rise of NOCs as foreign policy tools that present the conceptual challenge from a GPP perspective, but the impact on competition and market transparency. For example, so-called ‘red gas’ (Högselius, 2012) from Russia can be analyzed as a problem caused by Gazprom’s dominant position in European gas trade and its abuse of power. Two GPP observations are particularly pertinent: first, the precondition for ‘pro-market regulation’ to work on an international or global scale is sizeable market power backing up that regulation; second, the costs of non-market behavior may in fact be felt not so much by governments as by their state-owned companies (Goldthau & Sitter, 2015a).

The second conceptual contribution from GPP to realist analysis of global energy markets concerns the idea that energy is a strategic good in the sense that aspect of the energy trade has public goods characteristics with a strategic dimension. The point is not just that access to energy may be important for important national security reasons, but that some of international energy trade is simply too important (because of its security implications) to be left to ‘the market’. Energy trade relies on infrastructure – pipelines and safe sea-lanes – which need to be put in place and policed. Critical energy infrastructure often crosses borders or international waters, which in turn makes this a transnational or global problem. Sea-lanes and critical ‘choke points’ such as the Suez Canal or the Straits of Hormuz or Malacca have traditionally been kept open by the British and later the US navy. Serious market failure is simply not an acceptable option for modern states (Andersen & Sitter, 2016). The point was driven home in June 2019, when, after two attacks on tankers, the US government hinted that Asian oil-importing states should share the cost of keeping the Strait of Hormuz open (The Guardian, 2019).

Whether the topic is the power in international relations, the security challenges of infrastructure, policy tools for dealing with mercantilist NOCs (or IOCs), or market failures and the need to deal with major externalities, the intersection of analysis of market making and market correction (GPP), regulatory regimes (liberal IPE) and power of coercion (realist IPE) deserve thorough investigation. The next section turns to this potential for interesting new conceptual and empirical insights into global energy regimes.

Why IPE & GPP: common themes with different dynamics

The end of the post-cold war era and the backlash against globalization provided a boost for both the IPE of energy and the GPP of energy. If the ‘rise’ of globalization prompted IPE scholars to focus more on the interaction between the national, regional and international level of economic policy in the context of a unipolar world and the ‘Washington consensus’, the liberal order now being ‘rigged’ (Colgan & Keohane, 2017) makes IPE even more relevant because it brings national politics back in. The questions about who makes international rules and whom they benefit becomes even more important when the rules lose some of their force, when states or firms are less

committed to complying with these rules, or new and competing regimes emerge. At the same time, and for the same reasons, classical GPP questions about how actors contest policy and regulatory governance have gained importance. Oil market volatility and the regionalization (in Europe) and globalization (by way of LNG) of gas markets had driven this point home in the international energy sector. As [Table 1](#) shows, there is much common ground between liberal IPE analyses and energy-as-any-other-public-good GPP analyses. Both center on the conditions for markets to work, how markets can be built, and how they can best be operated. However, there is also much common ground between realist IPE analyses and GPP works that treat energy as a strategic good – even though the two focus on different dynamics. [Table 2](#) sets out some of the more recent challenges, again with a view to highlighting common questions in IPE and GPP.

In both IPE and GPP a dividing line runs between analysts who treat energy as an exceptional case and those who see energy more or less as any other commodity. For IPE scholars this is first and foremost a question about the relationship between fossil fuels and power; for GPP scholars it is a question how far energy must be treated as strategic good. Realist IPE scholars tend to treat oil and gas as a source of state power, with energy as a tool in inter-state conflict or a source of conflict. Liberal IPE scholars tend to focus on the aspects of energy related to trade. GPP scholars who consider energy an exceptional case often focus on problems of critical infrastructure and the impact of supply or price shocks. GPP scholars who focus on energy mainly as a ‘mixed good’ tend to emphasize the need for robust energy policy regimes. As the world moves towards a more important role of renewables in the energy mix, these claims have been extended to low-carbon technology, which some see as strategic industries (IRENA, 2019). The central point here is that realist IPE scholars and ‘strategic goods’ GPP scholars share much common ground – sometimes more than they share with their trade-oriented IPE or GPP colleagues. Indeed, it is at times hard to distinguish analytically between IPE and GPP, as scholars who study oil and gas from a trade or security perspective increasingly draw on both literatures. The next couple of paragraphs set out that this in fact ought to be the case, arguing for IPE research to enrich GPP scholarship, and vice versa.

The first set of parallel (or even common) debates in IPE and GPP with respect to energy concerns the extent to which the subject is exceptional. In most of the IPE literature, this ultimately comes down to whether energy is a question of high or low politics. For GPP scholars the question is whether the public goods characteristics of fossil fuels – or even renewables – have a strategic dimension. These are very much two sides of the same coin, but different in terms of how they assess and address the strategic

Table 2. Recent developments in energy and common questions in IPE and GPP.

Contemporary challenge	IPE	GPP
The age of abundance	Is the strategic dimension of fossil fuels decreasing or increasing?	Does energy remain a strategic good?
The increasing salience of energy security	Is this a threat to security?	Is this a failure of public goods provision?
The increasing importance of energy in hard power	Which states benefit from a given energy trade regime?	Why do/don't states comply with international trade rules?
The increasing role of NOCs and state corporations	Are NOCs an instrument of the states?	Do NOCs (and IOCs) illustrate the state's declining role?
Green race	Is this a new geoeconomic battleground?	Does green industrial policy allow internalizing externalities of high-carbon economic models?

aspects of energy. GPP approaches offer analytical tools to explore ways for ‘depoliticizing’ energy; realist IPE analyses focus more on how to manage and power asymmetries.

In this respect, the commercialization of shale oil and gas has brought revolutionary changes. Perhaps the most significant geopolitical factor is the US becoming a net energy exporter. With very different cost structures, shale oil production is very price sensitive and adds lots of flexibility (that is, elasticity of supply) to oil markets. Advances in technology ensure US shale supply is readily available at falling costs, heralding an ‘era of oil abundance’ (Levine, 2012). In a parallel development, surging US shale gas production coincided with a plethora of LNG projects coming online and boosting global LNG trade. This, in turn, offers a number of states an alternative (commodities trade-based) source of supply to pipelined gas (sold in long-term contracts). The implications have yet to play out fully, but it is clear that both large suppliers (such as Russia and Saudi-Arabia) and large consumers (e.g. the EU) face new and different rules of the game. For both IPE and GPP scholarship, the shale revolution presents the possibly important analytical insight that although oil and gas will likely remain strategic goods, the new battle might center on a shrinking market.

Second, IPE concerns about energy security and GPP debates about market failures are conceptually close. In IPE, the question whether energy is a source of security of supply concerns or an issue that links suppliers and consumers together in a web of interdependence depends largely on relative power. In GPP, the question is how to deal with common problems of negative externalities (e.g. climate change) or security of supply concerns that arise from one side or the other having a dominant market position in terms of goods, technology ownership, or investment. The tools, however, are somewhat similar: for the trade enthusiasts, to build robust regimes; and for the security scholars, to increase economic power. Again, much of the recent energy literature draws deliberately on both IPE and GPP to inform policy debates. Advocates of better and more robust trading regimes increasingly focus both on power and interdependence (IPE) as well as on the GPP literature on enhancing competition (through supply diversification) or hedging shocks (through infrastructure investment).

The third common theme concerns energy as an instrument and a subject of power. Here the IPE debate has made much of energy as a resource for states and as a tool of hard power – either by way of direct coercion or by resource-rich states using energy exports as a foreign policy tool. On the other hand, some of the recent GPP literature has turned to the way states can use rules and regulation to exercise a form of power that is less coercive than classical ‘hard power’ but more effective than the ‘soft power’ of attraction. IPE research on the role of power in building and shaping international rules increasingly informs GPP debates about the viability of different regimes for energy trade, transit and investment. Conversely, the GPP literature on compliance with international norms, and on the strengths and weaknesses of different types of regulatory regimes, offers a new dimension to the IPE literature on power in the energy sector.

The fourth theme that is increasingly common to both the IPE and GPP literature is the debate about the rise of non-state actors. Until the 1960s, global trade in oil – by the time the only truly internationally traded energy resource – was under control by few IOCs that cartelized the market with the blessing of their governments (in predominantly consumer countries). The OPEC era saw a shift of power to the producer countries. Thereafter the 1990s liberal era saw a shift to free international trade, the financialization

of oil, and private companies competing for market shares. The pendulum swung back to NOCs at the turn of the millennium, thanks to the rise of China and the BRICS. Here the IPE literature draws attention to the role NOCs play as agents of the state, whereas the GPP literature points to the role non-state actors (both NOCs and IOCs, but also traders) play in shaping the international regulatory game. Both will find common ground in exploring agency and compliance: a state's ability to use its NOC to project power or pursue foreign policy goals might well depend on the exposure of that very NOC to international, regional or even private transnational regulation, or even the external reach of other states' regulatory regimes.

A fifth and final theme relates to the implications of decarbonizing the global energy system. Both the IPE and the GPP literature view the latter as a transition process, though global public policy scholars may be more concerned with its management whereas international political economy scholars may favor its distributional effects. Common questions surround state strategies in scaling up renewables, the role of lead markets in determining technology leadership (see, e.g., Hughes & Meckling, 2018), or in trade-climate policy linkages, for instance in the shape of climate clubs (Nordhaus, 2015). Again, however, the issue is one of interpretation. Take trade: for scholars concerned with carbon leakage – essentially a race to the bottom problem – a carbon levy at the border such as the EU's planned Carbon Border Adjustment Mechanism enables stringent decarbonization targets. For geo-economists, it amounts to a trade measure aimed at giving domestic green businesses a competitive edge and at ensuring industrial supremacy at a global level.

Conclusion

To return to our opening assertion: GPP tells us why we need international regimes for energy; IPE tells us why we only have incomplete ones. To be sure, this statement deliberately exaggerates the differences between the IPE of energy and GPP of energy in order to draw attention to their differences with respect to assumptions, research questions, hypotheses, and causal dynamics. However, as many of the works cited above illustrate, it can be difficult to separate the two sets of literature in an unambiguous way. Indeed, much of the literature on the international politics, economics and governance of energy markets deliberately draws on both disciplines. The key conclusion here is not a call for an ever more blurred boundary between IPE and GPP – however attractive that might be in the study of any given topic. It is rather that awareness of both the IPE and GPP literature is essential for the scholar who wishes to write well about the IPE or GPP of energy. The extent to which the assumptions of realist or liberal IPE scholars hold in any given context is – and must be – an empirical question. Likewise, the question of whether energy is considered a public good or a strategic good by different actors is an open question. The central point here is that GPP and IPE ask distinct sets of questions, each informed by their own theory, and that both sets of questions are pertinent for empirical analysis of energy markets and/or regimes. For example, questions about how market failures and asymmetric market power can be dealt with by regulation add an important dimension to analysis of power and

interdependence. Conversely, the debates about different types of power are essential background to analysis of regulatory regimes and their success and failure. In past eras – the Seven Sisters era, the OPEC era, and the globalization era – one paradigm might have dominated over the other. However, the more the world of international energy is fragmented, the further it moves towards a deep transition process, and the more power and regimes differ across both fuel types and regions, the more important it is to question whether and how far the assumptions built into liberal, realist, public goods and strategic goods analyses of international energy hold at any given time and place.

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