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### Revisiting Power and Powerlessness: Speculating West Virginia's Energy Future and the Externalities of the Socioecological Fix

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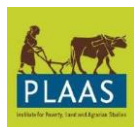


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# Revisiting Power and Powerlessness: Speculating West Virginia's Energy Future and the Externalities of the Socioecological Fix

Dylan M. Harris, James McCarthy<sup>1</sup>

## Abstract

*China is positioning itself, simultaneously and somewhat paradoxically, as a global leader in both renewable energy research, development, and deployment, and fossil fuel investment, exploration, and consumption. The newly merged mega-company, China Energy Investment Corp., has just agreed to invest an unprecedented \$83.7 billion into shale gas, power, and chemical projects in West Virginia. This decision comes after a visit to China by the United States' President Trump, during which he secured commitments for over \$250 billion in energy investments across the U.S. This paper traces some of the historic processes that have contributed to this current conjuncture in West Virginia's recent history, in part by revisiting Gaventa's (1982) examination of power and powerlessness in an Appalachian coal community. In many ways, this deal is just the latest instance of a long-standing pattern in which global capital invested in fossil fuel extraction moves to further exploit and dispossess those who live in the extraction area. In other ways, though, the current conjuncture is distinct, marked by a combination of populist and authoritarian politics that, in the U.S., have touted false promises to 'bring back coal' and rejuvenate a struggling local economy and in China have led an authoritarian state to maintain economic growth for the nation at all costs. While investment and dispossession in Appalachia have long been international in scope, the sheer scale of this investment, as well as its particular political-historical context, thus make this case unique. Further, this paper seeks to position these historical arguments within the context of what McCarthy (2015) has suggested may be a potential 'socioecological fix' to climatically precarious capitalist development, and to theorize the ways in which the energetic needs of a socioecological fix in the Chinese context, in which large-scale renewables are being implemented at an unprecedented rate, are externalized into developing and emerging peripheries. While any socioecological fix may turn on "appropriating and commodifying new aspects of the biophysical world on unprecedented scales" (McCarthy, 2015: 2496), this paper aims to explore the ways in which these large-scale shifts to renewables in some places articulate with and exacerbate long-standing reliance on fossil fuel extraction and oppression in others.*

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*In West Virginia, as in China, a vast storehouse  
of history lies beneath the official fabrication.*

- David Allan Corbin (1990: ii)

## **1 Introduction**

The 2017 World Energy Outlook, which surveys the current state of global energy demands, writes, “When China changes, everything changes” (IEA, 2017a). China, now the world’s second largest economy and largest emitter of CO<sub>2</sub> globally, has made promises to transition from a fossil fuel giant to a green energy colossus (Phillips, 2017). However, in addition to these promises, it has also become a world leader in foreign fossil fuel investment, exploration, and production. For example: China recently signed of a memorandum of understanding (MOU) promising \$250 billion in energy investments across the U.S. (Polson, 2017). A full \$83.7 billion of this MOU, an amount far exceeding the state’s typical GDP, was promised to the state of West Virginia for investment in natural gas production and chemical manufacturing. The deal is meant to bolster the state’s struggling economy, which has historically depended upon fossil fuel extraction. In this paper, we argue that this superficially paradoxical deal is not contradictory in the least. Rather, we argue that China’s investment in fossil fuel production abroad – in a state that has been historically dispossessed of its natural resources – can be seen as an ‘externality’ to what McCarthy (2015) theorizes as a possible “socioecological fix.” Moreover, we argue that the deal must be understood in the context of recent shifts towards authoritarian and populist governance regimes across the world, including in the U.S. and China. In order to further understand the context and contours of this deal, we revisit Gaventa’s (1982) examination of power and powerlessness in an Appalachian coal community. We argue that Gaventa’s work, written over three decades ago, is as relevant as ever.

Our argument proceeds as follows. The first section discusses the global rise in authoritarian and populist politics and relates these shifts to growing global energy demands. More specifically, it discusses linkages between authoritarianism in China and populist politics in the U.S., and how they coalesce around energy in the case of the recent MOU. The second section revisits Gaventa’s (1982) work on power and powerlessness, paying special attention to what he terms the “the third dimension of power,” and to the ways in which historical power struggles over energy and resources continue in present-day West Virginia. The third section discusses West Virginia’s historical relationship to energy, and to coal specifically, and highlights how the state is being positioned as a global energy hub in light of growing global energy demands. The fourth section reviews the meteoric rise in China’s energy use, emphasizing how the country’s current largely fossil fuel-based economy is shifting in light of mounting environmental crises. Finally, the last section theorizes China’s energy predicament, and West Virginia’s place within it, as part of a potential ‘socioecological fix’ to capitalist development.

## **2 Populism, Authoritarianism, & Energy**

Trump’s visit to China and the MOU he secured there for Chinese investment in energy production in Appalachia took place within, and are inexplicable without reference to, a global turn toward sharply populist and authoritarian politics in many countries around the world, the U.S. and China prominent among them (Scoones et. al., 2018). One of the countless chilling moments in the Trump presidency was his recent comment that Chinese President Xi Jinping’s elimination of term limits might be an idea worth considering.

We root the recent, pronounced turn towards populist and authoritarian politics in both the successes and failures of neoliberalism over the past several decades. First the failures, at least from the perspectives of many. Decades of increasingly liberal trade policies and agreements; more integrated multi-state financial and immigration policies, as in the E.U.; and the pursuit of export-oriented ‘comparative advantage’ strategies, not least in natural resource sectors, have failed to deliver the widespread prosperity their architects promised. Instead, as we all well know, many countries have seen sharply rising inequality paired with steep reductions in social spending and safety nets, just as

the latter are most needed. Cheaper consumer goods have proved poor compensation for the loss of work, dignity, and sense of full citizenship. Populism has been one response, with powerful social movements and associated political parties calling for protectionist economic policies, hardened borders, and isolationist and nationally self-interested foreign policy – in short, for the nation to be of and for ‘the people.’ When it comes to how ‘the people’ are defined in many of these politics, the parallels to the 1930s, including the explicitly racialized, xenophobic, and reactionary character of these supposedly nationalist politics, are frighteningly clear. Much of contemporary politics in the United States, including dominant politics in West Virginia, certainly fits this description. Some of these developments, at least, can be understood as responses to the failures of neoliberalism to deliver its promised economic utopia. [Whether it in fact succeeded in its actual agenda is another story: if the real purpose of neoliberals all along was to restore class power, privilege, and gross maldistribution of surplus, as Harvey (2005; see also Peck, 2010) contends, the project has been a stunning success.

To explain authoritarianism, though, we suggest that we need to look also at neoliberalism’s successes, first and foremost its stunningly effective de-legitimation of the social welfare or developmental state. After all, if people were dissatisfied with the direction or results of particular policies, the most obvious solution in a functioning democracy without major formal categorical exclusions from the political process would appear to be to vote into power representatives of a party that promised to take things in a different direction. While the major parties in many countries have been nearly equally complicit in implementing and institutionalizing core elements of the neoliberal agenda in many countries over the past several decades (e.g., Democrats and Republicans in the U.S., Labour and the Conservative party in the U.K.), surely that could change through sufficiently strategic voting. We suggest, though, that neoliberalism has been extremely effective in casting doubt on the legitimacy and effectiveness of the bureaucratic state as a means to achieve any policy goals: for decades, people have received remarkably strong and consistent messages that the state is controlled by special interests, that it is intrusive and antithetical to freedom; and that it is at best ponderously slow and cumbersome, unable to act quickly or effectively on urgent matters. Voting different people into office therefore seems to many a completely hopeless way to address genuine crises. So, in response, we get the classic figure of the “strong man,” the authoritarian figure (nearly always male) who will cut through the bureaucracy and norms to get things done quickly and decisively: Trump may or may not be Putin’s puppet, but he is surely his echo. The irony, of course, is that in many countries, and certainly in the U.S., rhetorical conservative contempt for and dismissal of the state have proceeded in lockstep with a systematic and wholesale capture of the state apparatus – a project whose results demonstrate powerfully that there is indeed such a thing as a state, and that it matters.

Authoritarianism and populism are also deeply interwoven with the politics and political economy of energy: from the brutal authoritarianism that has long defined the politics of many oil-producing countries (see Le Billon, 2005; Watts and Kashi, 2008) to the fact that many post-neoliberal states in Latin America’s ‘pink tide’ have ended up having to rely on continued oil revenues to deliver on their left-wing populist promises (Bebbington and Bury, 2013), we can see that populism, authoritarianism, and energy politics can and do combine into multiple different complex configurations (see Mann and Wainwright, 2018 for a rigorous meditation on where some of these configurations might go in the future). A full review of such actual and potential formations is far beyond the scope of this paper; here, we note just a few key components of how they mix in contemporary China and the U.S., particularly Appalachia.

The global spread of neoliberalism and China’s economic and military ascendance are inextricably linked to the rise of a truly global energy market: when OPEC flexed its members’ nationalist muscles in the early 1970s, a show of strength and unity with connections to the politics of decolonization and Third World solidarity, the most powerful countries of the global North responded by aggressively developing new sources of oil on the one hand, and forging a truly global market in oil on the other. Without these developments, in addition to the subsequent creation and dramatic expansion of the WTO and China’s entry into it, China’s rapid industrialization and urbanization would have taken a very different form at the least. Now, after decades of rapid industrialization and urbanization fueled

principally by a combination of domestic coal and imported oil, China faces new constellations of political structures and energy use. On the one hand, as an authoritarian state ruling over a robust capitalist economy in the name of the people, but with severe limitations on actual populist politics, China needs energy: many analyses suggest that the Communist Party must continue to deliver economic growth in order to retain its particularly tight hold on power. At the same time, though, mounting pollution is an increasingly central and overt political issue in China, one with the potential to challenge the legitimacy of the Party and state. Both new and cleaner sources of energy are, then, political imperatives.

In the United States, meanwhile, energy has become an intensely political and partisan issue, with outright denial of the clear science of climate change and enthusiasm for increased domestic fossil fuel production becoming core features of the identities of the Republican Party and its most reliable voters. Politically, much of the incredibly oil-dependent U.S. never entirely got over oil shocks of the early 1970s and the stunning idea that other people, particularly ‘other’ other people in the global South, might actually hold some serious power over the U.S. and its petroleum-based ‘way of life’ (Huber, 2013). The politics of aggressive domestic fossil fuel exploration and extraction and the search for so-called ‘energy independence’ are inseparable from that particular sort of aggrieved and entitled nationalism (Sarah Palin and “drill baby drill” being of course the iconic symbols of this impulse). This political configuration is perhaps nowhere more evident and deeply entrenched than in Appalachia and West Virginia, where countless people in all walks of life regularly blame environmental regulations supposedly dramatically curtailing coal production for all of the negative trends of the past several decades and pin all of their hopes for the future on the continuation, if not dramatic expansion, of coal production. The very fact that narratives with such extraordinarily tenuous factual bases are embraced and repeated with such fervor by people fully cognizant of the damage wrought by over a century of absentee-dominated coal production is testament to the power of right-wing propaganda mills to be sure, but also to the enduring hold of the sorts of hegemonic cultural formations and politics analyzed by Gaventa some 35 years ago.

### **3 Revisiting Power and Powerlessness**

Written over three decades ago, John Gaventa’s book *Power and Powerlessness* begins with the following questions: “Why, in a social relationship involving the domination of a non-élite by an élite, does challenge to that domination not occur? What is there in certain situations of social deprivation that prevents issues from arising, grievances from being voiced, or interests from being recognized” (1982: 3)? Gaventa goes on to explain that patterns of power produce quiescence, while a fundamental restructuring of those patterns can lead to rebellion. He applies this framework to an in-depth case study of the Clear Fork Valley, a once-thriving coal-mining valley located near the Cumberland Gap and situated between parts of Tennessee and Kentucky. In this paper, we explore the historic social, political, economic, and ecological contours of ongoing power struggles in the same general region, and highlight the various structures and ruptures that mediate the complex relationship between quiescence and rebellion that, we argue, continue to haunt modern-day Appalachia. Global developments continue to work through local places, and this is nowhere truer than in modern-day Appalachia, including West Virginia (Eller, 2013).

However, in order to better understand the enduring relevance of this work to contemporary Appalachia, it is critical to first review Gaventa’s discussion of power. Gaventa’s book operationalizes Steven Lukes’ (1974) tripartite conceptual framework for thinking about how power works. In the following section, we briefly outline Lukes’ three dimensions of power, including the operating mechanisms of each. We spend the most time on the third dimension of power and its mechanisms, agreeing with Gaventa (1982: 15) that it remains, “[b]y far the least developed and least understood,” and yet pervasive and pressing in light of current geopolitical developments worldwide.

i) *The one-dimensional approach to power*: This approach to power, which we might term naïve liberalism, focuses largely on participation. It assumes that people are empowered to voice grievances, which are then heard and acted upon. Participation – voicing and acting – is assumed to occur within a



formal or public decision-making arena or space, and is assumed to be open to any individual or organized group. Due to the openness of the decision-making process, leaders arise not necessarily as elites but as representatives of the full public. Once concerns are voiced in public fora, leaders act in response. Due to the presumed openness of this process, non-participation is a non-issue politically: lack of participation is due only to individual choice, and so is not a political problem properly speaking. The mechanisms of power considered in this approach are relatively straightforward: a politically empowered subject voices a grievance, it is discussed and debated within a public arena either by the individual or a representative, and it is addressed through some form of political bargaining agreement (e.g. voting). At most, this approach recognizes that the process is may more complicated in practice, if for example certain subjects are more vocal (and listened to) than others. For the most part, though, this approach tells us little or nothing about most real-world scenarios.

ii) *The two-dimensional approach to power*: This approach recognizes more complex, overtly political, and realistic reasons for why many people might not participate in formal politics, but its analysis remains at the level of overt political structures. Specifically, it emphasizes the fact that many categories of people may be formally barred from participation in public life or politics (on the basis of, e.g., gender, race, or immigration status). At the time, Lukes theorized such cases in terms of a “mobilization of bias” (Bachrach & Baratz, 1970; Gaventa, 1982: 14), i.e., a set of rules (values, beliefs, rituals, etc.) deployed systematically to make sure certain individuals or groups are allowed to make decisions and others disallowed. Today, we might be more likely to turn instead to Agamben (1995), Ranciere (2010), Arendt (1968), or Wynter & McKittrick (2015) to consider the same basic dynamics of who is or is not recognized and included as a fully political being. Critically, non-participants still want to, and may often eventually be able to, participate in political life, despite fear or oppression in the way of such participation. To take a few common examples, women and African-Americans in the United States fought long and hard for the right to vote, while the black majority in South Africa fought to end an apartheid system of government that denied their political being and rights. The point is, both the exclusion and the desire for inclusion are overt, and overtly politicized.

iii) *The three-dimensional approach to power*: Whereas individuals or groups are at least aware of their grievances in the first two approaches to power, this approach to power suggests that oppressed individuals or groups may not even consider the possibility that they can or should claim a grievance, or that anyone would listen if they did. In short, it dives into the terrain of ideology, subjectivity, and cultural politics. Lukes (1974: 24-25) argues that the three-dimension approach to power “offers the prospect of a serious sociological and not merely personalized explanation of how political systems prevent demands from becoming political issues or even from being made.” This approach provides deeper insight into the powerless, as their claims or conflicts may be entirely pre-empted through social and political processes that control and constrain power, ensuring that the powerless remain so.

Gaventa (1982: 13) uses Gramsci’s theory of hegemony to explain how this approach to power is operationalized in practice. In short, a hegemonic system is established through a combination of both consent and coercion that works to clearly define a set of spoken and unspoken rules, bar serious consideration of any alternatives, and establish the moral legitimacy of the elite. Power and powerlessness work in tandem as power establishes powerlessness as a social and political norm, resulting in a pervasive sense of powerlessness that “may manifest itself as extensive fatalism, self-deprecation, or undue apathy about one’s situation” (Gaventa, 1982: 17). In this scenario, the powerless are not entirely passive, but through exposure to hegemonic norms, their demands may lessen – or, indeed, never crystalize in the first place – as they are exposed to and come to accept as right and natural the rules, beliefs, and values of the powerful. Whereas the first two approaches to power considered how individuals or groups make political decisions or take political action, or at least strive to do so, this approach to power explains why many oppressed and dispossessed individuals and groups may not even conceive of certain decisions or actions as possible ones, or of themselves as potential actors who might undertake them, and therefore do not challenge their own domination. While this approach to power is not entirely totalizing or hopeless, as evidenced by Gaventa’s discussion of the various ruptures that occur in the Clear Fork Valley, it does focus on structures that are politically pervasive and socially persistent over time. Worse, and following from

Gramsci (1971), such power structures often develop organically, which is to say from the “ground up” in a broad sense, making them especially difficult to understand and dismantle. This is no clearer than when current Trump made several promises to ‘bring back coal’ at campaign stops across West Virginia, targeting local cultural political tensions by actually characterizing himself as a coal miner, in the run-up to the 2016 election.

Nearly thirty years on, Gaventa’s work still provides key insights into understanding the way power and powerless operate in contemporary Appalachia. Specifically, his discussion of the third dimension of power highlights the ways in which hegemonic political systems have come into being in a particular region, and the ways in which these systems further entrench powerlessness and encourage passivity. In light of the recent developments in West Virginia, these lessons are especially useful. Trump’s populist politics seem to graft seamlessly onto deeply entrenched political culture. However, Gaventa’s work also provides insight into the ways in which hegemonic power was countered: though his work examined the Clear Fork Valley, one need look no further West Virginia’s infamous mine wars to understand that powerlessness, while pervasive, need not be permanent (Corbin, 1990; Harris, 2017). This recent victory by West Virginia’s unionized public school teachers is further evidence of the possibility of challenge and change (Birdgood, 2018). The following section will look more closely at West Virginia’s rich political history and diverse political present to better contextualize China’s recent energy investments.

#### **4 West Virginia: Energy Hub for the World?**

In the run-up to and months following the 2016 U.S. presidential election, Appalachia enjoyed a rare moment in the national political spotlight. Best-selling novels and countless new stories attempted to give voice to the apparent voiceless, to better understand the ‘new minority’ (Gest, 2017), and to explain what was increasingly known as ‘Trump Country.’ Yet these recent events must be viewed in the context of a larger and longer political history: Appalachia has long been portrayed as lagging behind the rest of the U.S., whether despite or because of its resource wealth. In times of crisis, the U.S. looks towards Appalachia to be reminded of how far the rest of the country has progressed (West, 1973; Eller, 2013). The enigma of Appalachia – a rich land of poor people – is often attributed to the region’s culture or its environment, an argument applied to many places suffering from the alleged ‘resource curse’ (see Le Billon 2005). However, such arguments overlook the region’s diversity (Stoll, 2017; Catte, 2018), and obscure the “complexity of political and economic struggles within the region and diminish[...]national dialogue on the meaning of progress and most appropriate path to development” (Eller, 2013: 7).

Energy, and specifically coal, has been central to this political-economic history and its associated cultural politics, and we suggest that it is no coincidence that it was precisely on topic of energy, and specifically coal production in a national interest framed in strongly reactionary, racialized, and protectionist terms, that Trump drummed up populist support in a historically blue region. Specifically, he made repeated promises to ‘bring back coal’ and revitalize struggling regional economies, nowhere more loudly than in campaign stops in West Virginia.

A run of media outlets portrayed McDowell County, West Virginia, one of the state’s poorest counties located in the historic Southern coalfields, as the heart of Trump Country. Though there is much inconsistency among the actual politics of the county itself (Catte, 2018), it provides an excellent example through which to understand how much of the poverty in the region came into being via historical processes of power and powerlessness. In the 2017 article *When Walmart Left*, Pilkington describes the inequalities of the country via losses experienced by the closing of the county’s only Walmart. This narrative, though more nuanced than previous efforts to address poverty in the state, continues the logic that the state’s economic downturn can be solved by simply adding more jobs or building new roads, without any discussion of necessary structural change in the region (Eller, 1982; 2013). Further, these narratives, which focus on the localized level of these impacts, fail to connect these shifts to larger national and global processes.



Trump's promises to 'bring back coal' similarly do not address the structural reasons that West Virginia is, and continues to be, a sacrifice zone for national – and now global – progress. Many West Virginians are aware of this legacy, and yet, many still voted for Trump. As evidenced by Gaventa's work, this paradox is not new and is indicative of patterns of power that leverage certain narratives of progress over others. Those who may disagree, while still having grievances, are also still largely complicit. Coal is also at the center of this paradox.

West Virginians pride themselves on the fact that their state has historically provided energy to the country. Absentee land ownership has been a prominent feature of the state's land tenure throughout its existence. Toward the end of the 19<sup>th</sup> century, West Virginia shifted dramatically from an economy centered on small-scale farming and subsistence practices, toward one built around resource extraction. While trees and chemical processing were also key industries at the time, coal rapidly outpaced the rest. By 1900, Appalachia was responsible for nearly 80% of national coal production (Eller, 1982: 128), and West Virginia was the leading state contributing to that total. As coal mining operations spread across the state, coal became a central export of West Virginia's economy, despite ebbs and flows in the market. Increasing investment from New England and England and shifting legal frameworks enabled further land enclosures for coal production, resulting in coal mining operations owned mostly by absentee landowners.

The increasing economic inequality associated with coal production gave rise to strong labor unions and some of the largest labor uprisings in American history (Corbin, 1990; West, 2017). However, responses to organized labor, advances in mining technology towards automation, and national market shifts to other kinds of energy all led to coal operations moving from being largely underground and labor intensive, to far more capital-intensive and heavily automated strip mining (cf. Mitchell's *Carbon Democracy* (2013): strip mining could be construed as another response to the strategic advantages subsurface coal mining afforded labor). Underground coal production, though difficult and dangerous, could provide a relatively high number of jobs. Strip mining requires fewer people. More significantly, strip mining – often characterized as mountain top removal – scars the landscape, making it entirely unusable in many cases. This mining practice has been met with considerable political resistance, but its use has also slowed in recent years due to national and global shifts towards cheaper energy sources such as natural gas. As a result, the state's coal mining industry has declined substantially in the past several decades, and the state's economy along with it.

Such, at least, is the narrative often recycled in public discourse. While any number of structural failures, such as the failed War on Poverty or the failed Appalachian Regional Commission, could be cited, coal remains a source of pain and pride in West Virginia's politics. Trump's promise to 'bring back coal' resonates so loudly in the state because of this tension. It responds to and inflames localized antinomies about job loss and re-centers coal as both the cause of and the solution to a struggling economy. Further, it is a function of what Gaventa would call the third dimension of power, meaning that people, though discontent with poverty and inequality, are still subjects within larger structures of power, of continued dispossession and oppression.

For decades, West Virginia has been an important energy hub for American progress. This unequal relationship has left the state heavily polluted, persistently poor, and with politics widely recognized as being dominated by the coal industry and external owners and exploiters of the land and its resources. It is with this history in mind that we now shift towards consideration of West Virginia's energy future. In the following decades, the U.S. aims to move away from being an energy importer towards being one of the world's foremost energy exporters (IEA, 2017a). This is especially critical in light of the recent negotiations between the U.S. and China, in which Trump has acquired the MOU referenced above for an unprecedented \$87.3 billion of Chinese investment in West Virginia's energy economy, an amount that dwarfs the state's typical GDP (Polson, 2017). According to U.S. Senator Shelly Moore Capito, a WV Republican, the investments would expand "Appalachia's energy infrastructure, including developing a regional hub and market for natural gas liquids" (Polson, 2017). West Virginia is already a contested site for fracking and natural gas production (Meehan, 2018; Mishkin, 2018), and the details of proposed MOU, which are scant at best (Mistich, 2017), are raising key questions about

West Virginia's and Appalachia's energy futures (Ward, 2017). These deals, though speculative, build upon historic precedent and ongoing economic anxieties stoked by populist politics to position West Virginia as an energy hub for the world, and for China specifically. The following section outlines the known coordinates of this deal, and situates it within China's shifting energy economy.

## **5 China's Energy Needs: Past, Present, and Future**

Despite being one of the world's largest producers and consumers of both coal and oil (Fridley et. al., 2017), and overtaking the U.S. in recent years as the world's largest emitter of CO<sub>2</sub> (UOCS, 2017), China is also making strides towards becoming a world-leader in clean and renewable energy production (Bradsher & Friedman, 2017). China has recently received global attention for these efforts through the development of unprecedented large-scale solar energy projects, which include: the world's largest floating solar farm built symbolically above a collapsed coal mine (McBride, 2018); the world's largest terrestrial solar farm, capable of powering over 200,000 homes (Phillips, 2017); and a 250-acre solar farm built in the shape of a giant panda (Garfield, 2017). While making strides towards becoming a world leader in renewable energy, China's energy projections continue rising, which may provide insight into China's recent promises to invest nearly \$250 billion in energy production and chemical manufacturing in the U.S., with \$87.3 billion being invested into fracked natural gas production in West Virginia (Polson, 2017). A brief overview of China's current and future energy demands, as well as the politics that drive these demands, will provide further insight into this seemingly paradoxical deal.

During the keynote address of the 2017 World Economic Forum in Davos, Chinese President Xi Jinping said, "It is important to protect the environment while pursuing economic and social progress so as to achieve harmony between man and nature and between man and society" (see China.org, 2017). In the speech, President Jinping discussed the meteoric rise of China's economy – which has so famously brought nearly three quarters of a billion people out of poverty over the past twenty years (CREO, 2017) – and argued in defense of more intensified globalization in the face of stagnant global markets. This growth, however, comes at a cost. Images of smog rolling across Tiananmen Square in the nation's capital Beijing regularly circulate on both Chinese and international media, drawing attention to the country's mounting environmental crises, brought about by fossil fuel consumption (Griggs, 2017). The rise in pollution in cities like Beijing can be directly linked to China's economic growth, and increasing awareness, some argue, may lead to economic stagnation and questions of legitimacy among the country's ruling party (Albert & Xu, 2016). China's unique blend of authoritarian political rule, recently solidified through President Jinping's elimination of term limits (Blanchard, 2018), and a capitalist economy, now the second largest in the world (McCurry & Kollwe, 2011), is now facing pressure as demands for environmental wellbeing and the increasing needs for energy exist at a crossroads (Xu & Mason, 2017).

*Figure 1* shows that China's production of coal and oil has increased dramatically since the 1950s, with an especially steep rise post-2000, a history that corresponds to China's increased coal and oil consumption (see *Figure 2*). There has been a slight decrease in production since 2010 (Fridley et. al., 2017). This decrease has been linked to what Qi et. al. (2016) argue is a peak in China's coal consumption, leading to a decoupling of China's economic growth and coal production. However, a more critical reading would link China's decreasing coal usage to the nation's glut in coal due to overproduction, which can be traced to 2012 (Bai et. al., 2017). Regardless of declines in coal and oil production and consumption, coal and oil still constitute the majority of China's energy mix. However, mindful of its mounting environmental crises and the need to maintain meteoric growth, China has recently turned towards diversifying its energy mix, calling for an increase in cleaner energy sources like natural gas and renewable energies.

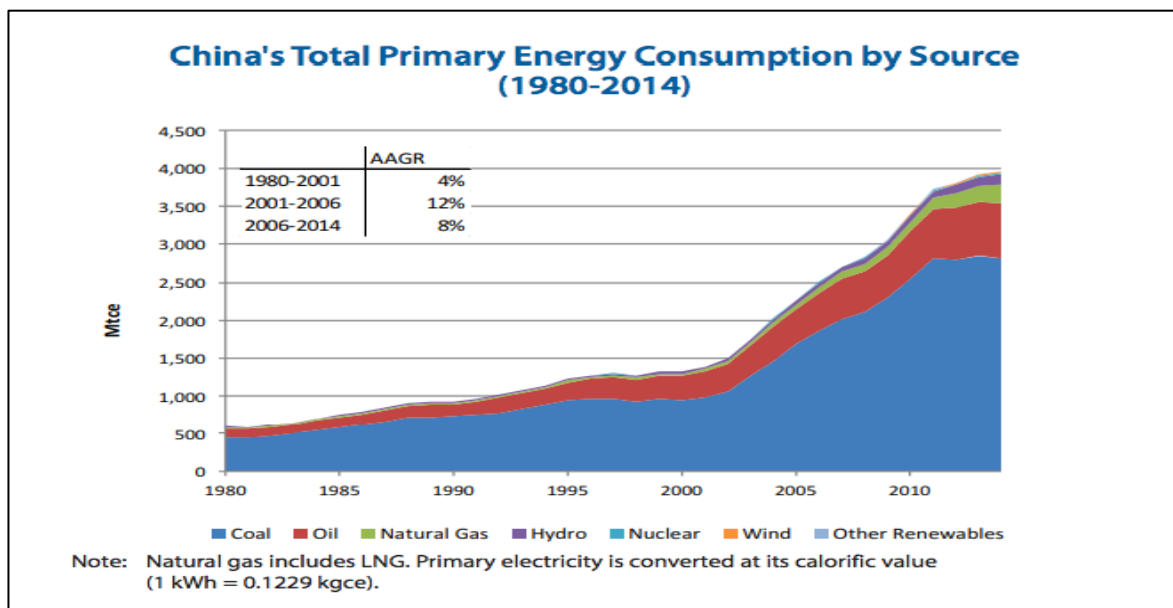


Figure 1 (Fridley et. al., 2017)

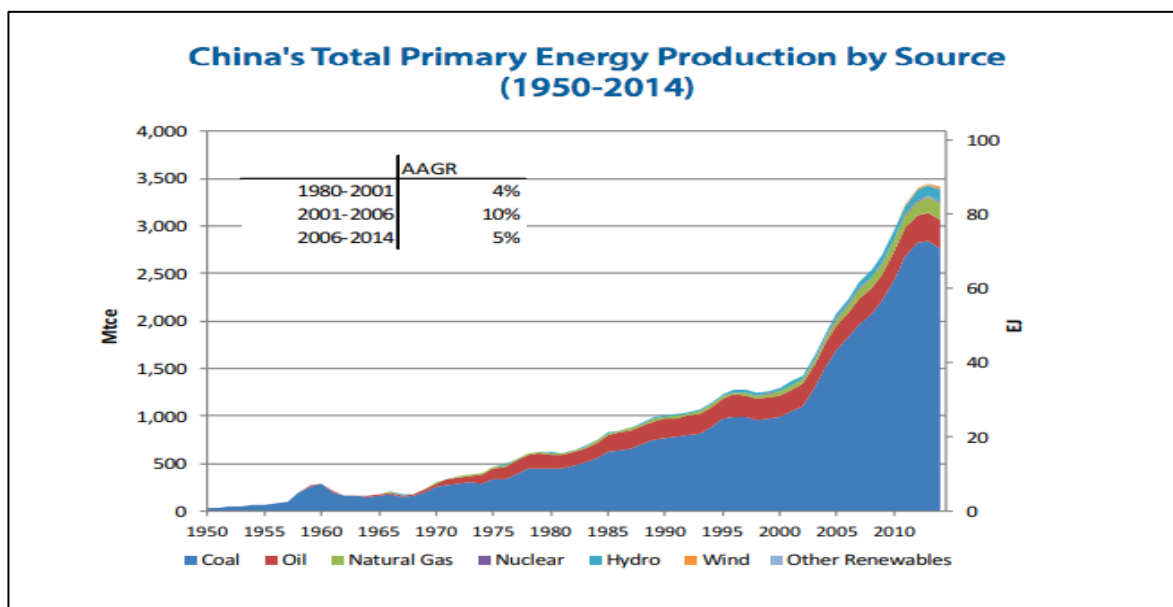


Figure 2 (Fridley et. al., 2017)

According to the 2017 World Energy Outlook, “China is changing and its energy future promises to be quite different from its energy past” (WEO, 2017b). *Figure 3* shows the projected capacity for new energy futures in China under the WEO’s *New Policy Scenario*<sup>2</sup>. While coal and oil consumption will remain in the energy mix, it is expected to peak in the next decade or so while, a mix of natural gas and renewables are expected to increase exponentially. China’s commitment to increasing renewable infrastructure has resulted in a 20 GW increase in wind power and a 9 GW increase in solar power as

<sup>2</sup> **New Policies Scenario** of the *World Energy Outlook* broadly serves as the IEA baseline scenario. It takes account of broad policy commitments and plans that have been announced by countries, including national pledges to reduce greenhouse-gas emissions and plans to phase out fossil-energy subsidies, even if the measures to implement these commitments have yet to be identified or announced. (<https://www.iea.org/publications/scenariosandprojections/>)

of 2014 (Fridley et. al., 2017). This number has certainly increased since the construction of the solar projects mentioned above. However, a large portion of China’s future energy usage will depend largely upon natural gas. Since 2000, China’s consumption of natural gas has increased at a rate of 15.3% a year (Fridley et. al., 2017), and it is on track towards becoming the world leader in natural gas consumption. The increased demand for natural gas in China comes at time when the U.S. has recently harnessed “a remarkable ability to unlock new resources” through its “shale revolution” (WEO, 2017a). *Figure 4* shows the expected uptick in U.S. oil and gas production, as it moves from being an importer of energy to an exporter under the *New Policy Scenario*.

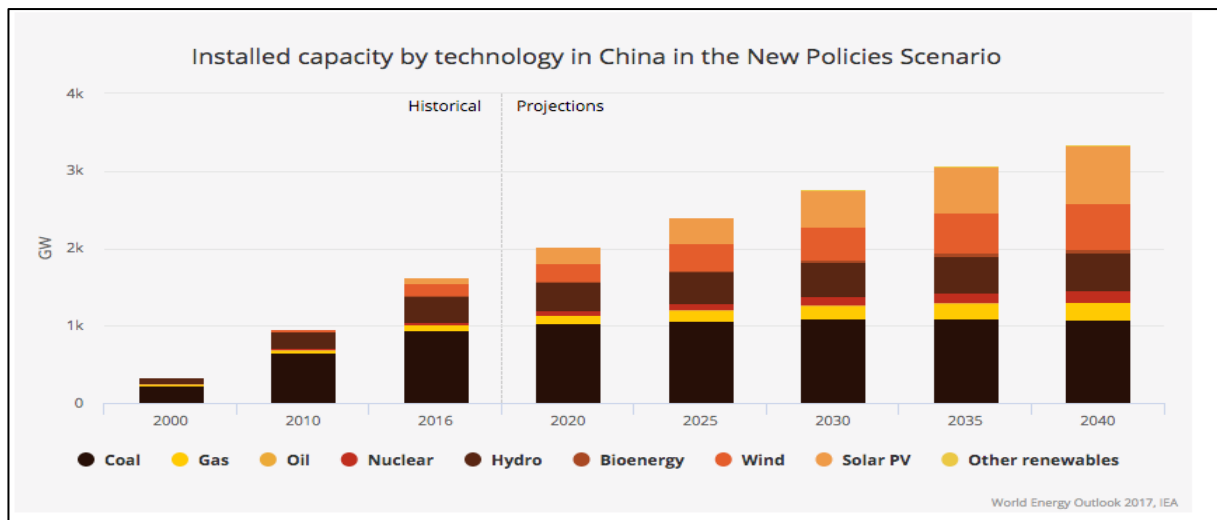


Figure 3 (WEO, 2017a)

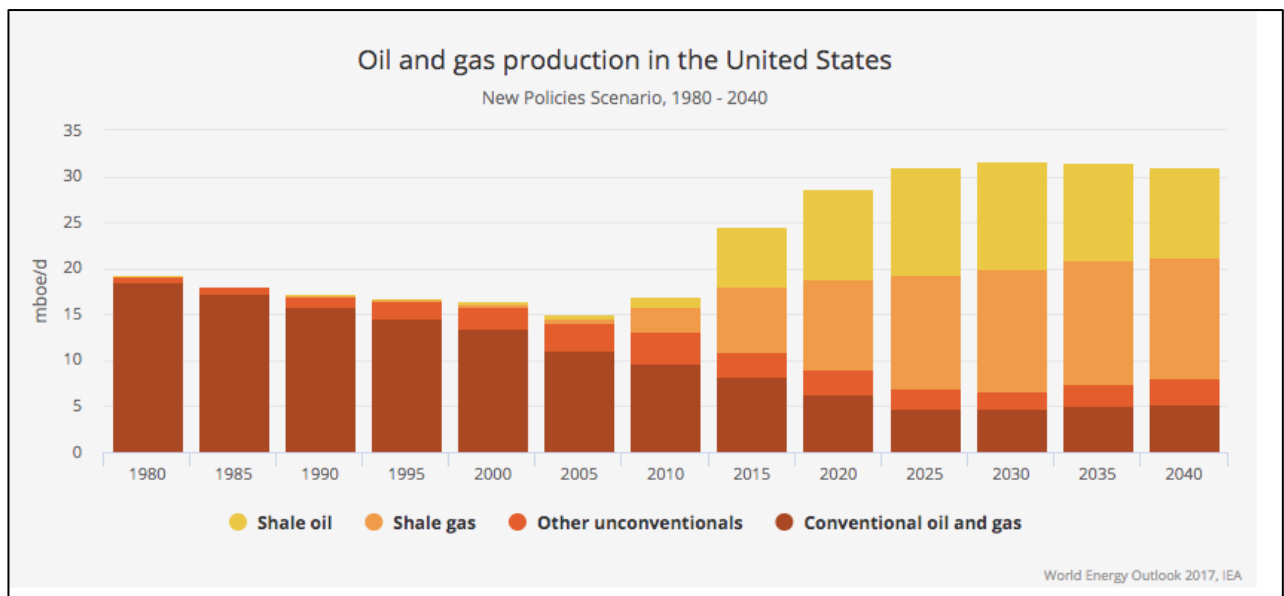


Figure 4 (WEO, 2017a)

Facing environmental crises and threats of legitimacy, China’s ruling party aims to decrease its production of coal and oil and increase its clean and renewable energy infrastructure over the coming decades. At the same time, the U.S. is still seeking to become a major energy exporter – of fracked natural gas, in particular – and the Trump administration in particular has made much of its promises to bring back jobs to an economically downtrodden state that has historically leaned upon fossil fuel

production. We see these trends coming together in the deal referenced above for major investment by China in increased natural gas production in West Virginia.

In the context of the *New Policy Scenario* outlined by the WEO, what historical injustices are being repeated in West Virginia? Further, how does the unprecedented move towards renewables and cleaner energy in China, which continues to grow and develop at all costs, relate to the potential reimplementing of historical structures of dispossession and appropriation of West Virginia's natural resources? In the following section, we theorize these shifts relative to what McCarthy (2015) terms the "socioecological fix," paying attention to ways in which this fix is situated within, and comes as a result of, current authoritarian and populist trends in governance, including of rural spaces and resources.

## **6 The Externalities of the Socioecological Fix?**

Capitalism is a set of social and socioecological relationship predicated on unending growth, ever-expanding transformations of the material world, and profound inequality and unevenness of many sorts. For these and other reasons, it is prone to periodic crises of multiple sorts and degrees of severity, in which the steady circulation and expansion of capital is interrupted and perhaps threatened at a systemic scale. As McCarthy (2015: 2486) puts it, "Since capitalism can be defined as a system organized around the perpetual expansion and accumulation of capital, widespread and potentially systemic interruptions and threats to such accumulation can be reasonably cast as crises, and anything that threatens or limits sustained capital accumulation over time calls the continuation of this form of social organization into question." One of David Harvey's enduring contributions to the integration of Marxist and geographic theory was to posit the possibility of "spatial fixes" to capitalist crises, in which capitalists temporarily resolve, or at least postpone the realization of, crisis tendencies through their control over space and capital – for example, by finding new and cheaper inputs, whether of raw materials or labor; finding or creating new markets, by force if necessary; or, most paradigmatically, investing large amounts of otherwise over-accumulated capital into infrastructure or production facilities in new locations, where its value might not be realized for a long time (Harvey 1982). Notably, many of these 'fixes' require the exercise of a state's sovereign powers, whether that be in the form of declaring war (or a trade war (Berman, 2018), legally enclosing common resources, coordinating and financing large, long-term projects that require a state's ability to borrow without collateral, or other such interventions.

More recently, in the context of increased attention to the fact that capitalism is always, necessarily, a set of socioecological relations as well as social relations, and to the fact that environmental dynamics may be important sources or sites of crisis for the reproduction and expansion of capital accumulation, a number of authors have speculated about the possibility of "socioecological fixes" to capitalist crises, in which the reconfiguration of socionatural relationships may figure as or more centrally in the abatement or resolution of crises as the more "social" measures above (see, for example, Ekers and Prudham 2015, 2017a, 2017b; McCarthy 2015). In part, this is of course about recognizing that each of the much-studied 'fixes' to crises mentioned in the preceding paragraph has its ecological components as well: appropriating elements of the environment as 'natural resources,' transforming landscapes through construction, using more fuel and packaging to ship more and more commodities greater and greater distances, and so on. But it is also about emphasizing the extent to which contemporary capitalist crises and their fixes turn directly and overtly on ecological dynamics and relations: e.g., if scarcities of food, fuel, or water appear to threaten future accumulation, we see a global land rush in response; if mounting climate change threatens accumulation, renewable energy and geoengineering of the climate are proffered as new industries; if centuries of traffic in living commodities and climate change spread diseases, we consider gene drives to combat that spread. And if either energy shortages or rapidly mounting air pollution in China after decades of rapid, largely coal-based industrialization and urbanization threaten either the continuation of that development or the stability of the state overseeing it, we see an intense effort to develop and secure new fuel sources



around the globe on the one hand, and a particular focus on the development of renewable energy and the future importation of cleaner-burning fossil fuels on the other.

In a series of recent articles, McCarthy (2015) and co-authors (Huber and McCarthy 2017, McCarthy and Thatcher 2017) have begun to explore the potential roles of major increases in renewable energy deployment (both current, which are already very significant, and projected, which are potentially enormous) in such socioecological fixes. Several aspects of the argument are relevant here. First, large-scale renewable energy development could function as a classic ‘spatial fix,’ absorbing and fixing very large amounts of surplus capital and labor in the production of new infrastructure and production facilities with long life spans, and in young industries with relatively high rates of innovation. Second, such initiatives could well involve states using their authority to allow and promote new uses of their territories in the name of the national interest, even if doing so entailed displacing existing users or claimants. McCarthy and Thatcher (2017) develop this line of argument to suggest that there is the potential for land for renewable energy generation to emerge as a substantial additional factor in the ongoing land rush (see also Li 2014, Le Billon and Somerville 2016). Third, what would be subject to enclosure might not be only the land on which renewable energy facilities sit, but the energies of the sun and wind themselves – forces classically held to define what was beyond the reach of enclosure (McCarthy 2015, Huber and McCarthy 2017). Fourth, Huber and McCarthy contend that such a historic shift, in which energy production that went mostly ‘underground’ early in the Industrial Revolution becomes again a spatially extensive aboveground land use, would necessarily set in motion sweeping changes in the production of space in the contemporary world (Huber and McCarthy 2017). While such a transition might look like a ‘return’ to central aspects of pre-capitalist economies in some respects (see Wrigley 2010, but cf. Malm 2016), it would be a dramatically new and different economy in most ways. Finally, and directly relevant to the case of China, to the extent that mounting pollution and health effects associated with fossil fuel use (particularly of coal) threaten the legitimacy of the state that permits them, large and visible turns in the direction of renewable energy might help forestall a crisis of legitimacy.

Yet, such fixes are only ever partial and temporary. While socioecological fixes may resolve some ‘externalities,’ we suggest that they turn out to have externalities of their own. We thus do not find it contradictory, but in fact entirely consistent with the above framework, that China is ambitiously researching and deploying renewable energy technologies within its own national territory, both to maximize energy supply and to respond to domestic political pressure regarding pollution, at the same time it is aggressively seeking to develop and secure access to new fossil fuel deposits elsewhere in the world. Likewise, nothing in the framework above is inconsistent with the possibility that new investment in fossil fuel production in West Virginia might be perceived by, or even temporarily function as, a ‘fix’ to an atmosphere of social and economic crisis itself born of a century or more of the so-called resource curse. From this perspective, West Virginia natural gas might come to occupy essentially the same role as Angolan or South Sudanese oil in China’s energy portfolio, while Chinese capital may come to play roughly the same role in West Virginia’s economy by 2025 as New York capital did in 1925.

## **7 Conclusion**

In this paper, we have examined the historical, political, social, and ecological contours of the seemingly paradoxical MOU from China to invest an unprecedented \$250 billion in energy exploration and production across the U.S. Given that \$87.3 billion of this deal is destined for West Virginia, we have looked closely at the ways in which contemporary populist politics in the U.S. grafts onto historical patterns of dispossession in a state that have long-served as resource colonies for capitalist development at home and abroad. As China’s ruling party struggles to maintain legitimacy and ensure economic growth in the face of looming environmental crises, it is making strides towards building the world’s largest renewable energy infrastructure. At the same time, China is investing in fossil fuels extraction elsewhere, and in West Virginia in particular. The state, which has historically leaned upon coal production to bolster its economy, is now being tapped once more for its fossil fuel resources, now in the form of fracked natural gas. We have argued that these investments in West

Virginia build upon historical cases of dispossession that consistently position the state, rich in natural resources, as one of the poorest in the U.S. Further, we argue that these investments can be understood as externalities to a socioecological fix for China's growing economy. While many West Virginians recognize that this deal, if passed, is yet another raw deal (Ward, 2017) – one in which the state serves as an extraction colony for absentee landowners (Lucas, 2017) – West Virginia is hamstrung between populist politics, historical power imbalances, and false promises to bring jobs back to a downtrodden economy. Returning to Gaventa's (1982) findings in the Clear Fork Valley over thirty years ago, this energy deal highlights the ways in which power and powerlessness coalesces to ensure quiescence among the angry and dispossessed. However, as Gaventa's (1982) works also points, there may yet be points of rupture that tip the balances of power and powerlessness in favor of genuine structural change.

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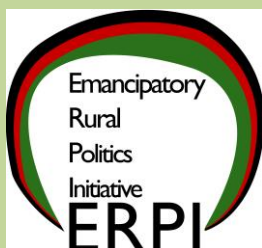
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