Challenging Injustice through a Critical Approach to Energy Security: A Central Component of Environmental Security

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Abstract
The search for energy security is one of the key dynamics that is re-shaping politics and governance in the twenty-first century, particularly throughout Asia and the emerging economies of the global South. With extraordinary growth rates of energy consumption predicted for many regions there is a need to critically re-assess the concept of energy security and its central focus on the needs of nation-states. Although theoretical approaches to human and environmental security have lifted the referent object away from the state the importance of energy to the military and economic power of modern industrialised states has ensured that the concept of energy security has remained almost exclusively state-centric. As with other aspects of security, however, the state is often not the best means of pursuing energy security for marginalised individuals or communities, particularly in non-democratic states. This paper therefore reviews the existing security literature and argues that a more critical approach, as one component of a critical environmental security framework, is needed to challenge the injustices that confront marginalised communities throughout the global South.
Introduction

The search for energy security is one of the key dynamics that is re-shaping politics and governance in the twenty-first century, particularly throughout Asia and the emerging economies of the global South. With increasing rates of energy consumption predicted for many regions there is a need to critically re-assess the concept of energy security and its central focus on the needs of nation-states. Although theoretical approaches to human and environmental security have shifted the referent object away from the state the importance of energy to the military and economic power of modern industrialised states has ensured that the concept of energy security has remained almost exclusively state-centric. As with other aspects of security, however, the state is often not the best means of pursuing energy security for marginalised individuals or communities, particularly in non-democratic states. Furthermore, state-centric approaches do not allow either an emphasis on more localised communities or a normative emphasis on injustice. Various existing approaches to critical security studies have adopted these shifts but without a focus on the significance of environmental factors and relationships, which are so precarious for many communities in the South.

In the pursuit of national energy security states often engage in large-scale energy projects, but these frequently result in insecurity for already marginalised communities who live in the vicinity of the projects. The impacts of this energy exploitation are likely to be felt most acutely in the environmental capital and processes that the communities rely on, such as food, water and less destructive local energy sources. It should also be acknowledged, however, that the social and political context within which these communities exist plays a significant role in determining the specific outcomes of the projects, and whether, indeed, they proceed at all. A critical environmental security approach that acknowledges the relationship between these communities and both their environment and the socio-political structures they inhabit is therefore best placed to capture the significance of these impacts.

Within such an environmental security framework the role of energy is of central importance. Energy security has been largely entrenched within realist or state-centric approaches to security studies but the concept can be critically re-imagined by adopting a justice focus that can be applied to marginalised individuals and communities. Within the voluminous energy security literature this approach has
been somewhat overlooked. This paper therefore begins with a brief outline of a critical environmental security framework within which such an energy security concept would be located. The rest of the paper critiques the existing conceptions of energy security and argues that a more critical approach to energy security offers a valuable prism through which to understand the situation that faces the communities that surround these energy projects, and that of many other marginalised communities throughout the South.

The Emerging Concept of Environmental Security

Environmental security has now become a well-accepted concept within politics and policy circles. Ken Booth, a security theorist, sees it as the ‘central battleground for the theory and practice of world politics over the decades to come’ (2007, 57). It has been considered a global security issue at the UN Security Council (Detraz and Betsill 2009) but, as with most political concepts, its meaning is heavily contested. While environmental insecurity often includes threats related to food, water, energy, clean air or climate change there are also a variety of approaches in the way that these and other components are addressed (Doyle and Risely 2008; Floyd and Matthew 2012). The evolution of the concept parallels paradigmatic changes that have occurred within the security studies discipline itself over the last three decades. Until the 1980s the concept of security within politics and IR was limited to a militaristic state-centric approach. Barry Buzan’s seminal *People, States, and Fear* (1991) in the early 1980s attempted to broaden security studies by including a link to environmental issues, and acknowledging the significance of smaller units of human collectivities. Despite this shift the initial focus of environmental security research remained issues of conflict and Homer-Dixon (1999), the most influential theorist in the 1990s, examined the relationships between environmental scarcity and conflict. Despite the prominence of this work, critics such as Litfin (1999) argued that Homer-Dixon understated the social, political and economic causes of environmental damage.

This emerging approach to environmental security coincided with the growing acceptance of a concept of human security, which emerged predominantly within the development community. This notion gained widespread policy recognition with the publication of the UN’s *Human Development Report 1994*, which was the first major publication to shift the referent object of security to individuals and one that also identified environmental insecurity as being one of seven major threats to human
security (UNDP 1994, 22-33). The UN continued to view the state as the actor most responsible for achieving collective human and environmental security (UN 2004), but the UN Commission on Human Security argued that the focus should shift from ‘the security of [the state’s] borders to the lives of people and communities inside and across those borders’ (Commission on Human Security 2003, 6). This reliance on the state, from a critical perspective, is part of a broader shortcoming of this methodological approach: ‘many scholars addressing human security challenges do so not from a “theoretical” security studies background, but rather from areas which tend to be less “critical” in approach, such as UN or development studies’ (Newman 2010, 77-78). Critical analysts argue that unreflexive bureaucratic approaches do not acknowledge the role of power relationships in knowledge construction and therefore the human security concept lacks a vital analytical component (Bosold 2011).

As the human security concept emerged in the development field in the early 1990s, more critical approaches also appeared within security studies that shifted away from the dominant militaristic Cold War paradigm towards individuals and communities, challenging both the conventional understanding of security and the object to be secured; necessitating an epistemological shift in the way security was understood and analysed (Krause and Williams 1997, 49). The result of this shift was a movement away from the positivist, rationalist approach of both neorealism and neoliberalism towards more interpretive and constructivist modalities, which have provided an increasingly diverse alternative understanding of what security entails (see Peoples and Vaughan-Williams 2010).

In summarising the various approaches to critical security studies Browning and McDonald (2011) argue that they have three central themes in common: first, a critique of the state as the referent object of security; second, a concern with the politics of security and the resultant implications for the legitimacy or otherwise of various actors or identities; and, third, a concern with the ethics of security and with striving for more progressive outcomes, often requiring a reformulation of the security concept. A prominent approach within critical security studies, the Welsh or Aberystwyth School, based on the works of Ken Booth and Richard Wyn Jones, applies the concepts of community and emancipation to human security (Booth 2005, 11-12), which is not dissimilar in principle to much emancipatory environmental
politics. Likewise, Thomas argues, in a more critical approach to human security, that basic material needs should be met together with

the achievement of human dignity, which incorporates personal autonomy, control over one’s life and unhindered participation in the life of the community. Emancipation from oppressive power structures, be they global, national or local in origin and scope, is necessary for human security’ (2000, 6).

Emancipation in a security context is therefore comparable to ecological emancipation in environmental political writings, which argues for an increase in the power resources of the poor and the environmentally degraded (Doyle and Doherty 2006, 883).

Despite these similarities it is only formulations of environmental security that give due recognition to the centrality of various environmental concerns facing most people who live in the South. Although definitions of environmental security are varied, the approach adopted by Jon Barnett draws on green theory and critical theories of IR and is the most useful starting point. His definition of environmental security considers the way in which ‘environmental degradation threatens the security of people’ (Barnett 2001, 12). In this and other publications his work has focused on the inequitable distribution of degradation resulting from unequal social structures, arguing that human environmental insecurity is more socially created than naturally determined (Walton and Barnett 2008). This approach resonates strongly with theories of environmental justice and sustainability and addresses concerns raised about more realist approaches to environmental security. As environmental justice theorist, Andrew Dobson, argues, ‘social justice is functional for environmental sustainability, and … environmental sustainability is – at the very least – a necessary condition for social justice’ (1998, 4). As Litfin concludes, ‘environmental insecurity turns out to be a consequence of social structures rather than ecological degradation per se’ (1999, 364). From this perspective environmental security focuses more on the impacts on human security rather than exclusively ‘securing the environment’, which Barnett terms ‘ecological security’, and even less on the traditional approach which is concerned with threats to national security from environmental degradation (Barnett 2001, 12; Buzan 1991, 132; Dupont 2001, 13; Goh 2006, 229; Hough 2008, 156-63). Although more critical in its method and attitude this approach to environmental security borrows aspects from both main schools of human security. The narrow
school considers human security to be threatened by political violence from the state or any other organised political actor while the broad school considers security to be concerned with the protection of people from critical life-threatening dangers regardless of whether these derive from anthropogenic activities or natural events (Kerr 2007, 95).

Some writings on environment and security have been concerned with ‘social disruptions’ as the principal source of insecurity (Najam 2003, 14). In this sense, dislocation caused by major development projects may cause insecurity, but when this is linked to civil conflict the impacts are compounded. As an additional dilemma, there is now a well-established link between the exploitation of abundant resources – such as oil and other fossil fuels – and the propensity for civil strife, indicating that resource exploitation may be linked to both environmental and human insecurity (Auty 2005; Hancock 2003, 71; Ross 2003). Civil conflict may also be exacerbated by inequity through the denial of people’s access to their traditional environments through dispossession (Barnett and Adger 2007, 647). Within the field of environmental security, therefore, Lonergan argues that ‘environmental degradation and resource depletion as causes of conflict may be overstated [but] it is undeniable that increasing inequities in society are likely the major source of … non-conventional threats to individual security’ (Lonergan 2000, 73).

These inequities are experienced both within and between states and often play a central role in the definition of associated threats or insecurity. As Chaturvedi argues, ‘knowledge about environmental degradation is neither scientifically neutral nor politically innocent [in this] increasingly interdependent but highly asymmetrical world’ (Chaturvedi 1998, 703). He further posits that previously ‘colonial’ environmental concerns are now assigned the ‘global’ adjective, even though they may be the parochial interests of powerful elites. A concept of environmental security that is more inclusive of the interests of the majority of the world’s inhabitants requires an understanding of the environment

as a diverse nature which is inclusive of people; a nature which has the potential to provide secure access to all citizens … to basic nutrition; adequate access to healthy environments; appropriate shelter; and, a security to practice a diverse range of livelihoods which are both culturally and ecologically determined (Doyle 2004, 159).

This approach to environmental security is at its most salient in the global South where environmental struggles may impact on the immediacy of survival itself.
In campaigns against the Narmada Dams Indian activists threatened to drown themselves in the river unless the government took action to intervene to protect essential elements of their environmental security such as shelter, water and food (Williams and Mawdsley 2006, 667). It becomes apparent, therefore, that campaigns for environmental security, particularly in the South, are strongly linked to broader struggles for environmental justice. Having provided an overview of the shifting environmental security landscape, the rest of the paper develops a critical approach to energy security that can be located within this framework.

Energy Security

Energy security is a nebulous and contested concept. It is only one aspect of a broader environmental security (Floyd and Matthew 2012), but it has often been dealt with independently due to its central importance to the modern industrialised state. Unlike other aspects of environmental security it has a long history as an issue that has exercised both security analysts and national policy makers. Energy security concerns dominated global headlines following the oil shocks of the 1970s but low fossil fuel prices for the subsequent two decades reduced its significance for both the public and political decision makers. With the return of high oil and commodity prices since the turn of the century energy security as a concept is once more at the top of the global agenda: ‘Lawyers, bankers, brokers, economists, geographers, geologists, engineers and journalists speak of energy security with the same confidence as generals, development workers, defence analysts or environmental activists’ (Ciuta 2010, 123-24).

The importance of energy to industrial society has meant that although water, for example, is far more essential to human survival, it has been the efforts to secure national energy supplies, largely from fossil fuel sources, that have been of central concern to most national governments, and, as a result, energy security as a concept has been traditionally approached from a state-centred national security perspective. It is only in extremely water-deprived areas, such as the Middle East, that water security is considered to be a similar national security concern (Dannreuther 2007).

Most definitions of energy security include some combination of availability, affordability and reliability, with recent work adding concepts such as sustainability (Elkind 2008). From a critical security perspective, however, it is also important that
energy security is not achieved at the expense of other aspects of environmental security, such as food or water security. Energy security could therefore be broadly defined as being achieved when there is sufficient energy available to satisfy the reasonable needs of the political community (the referent object) in an affordable, reliable and sustainable manner as long as pursuing it does not cause environmental insecurity to that or any other political community.

When considering the achievement of energy security, as with any security concept, there are three fundamental questions to ask: ‘for whom?’, ‘from what threats?’ and ‘by what means?’ Underlying most definitions of energy security – and Sovacool (2011, 3-6) provides a list of 45 – is the assumption that it is a concept that applies primarily to the nation-state, which, as the referent object, is the answer to the first question. The second question could receive a variety of answers, even from traditional theorists. Realists might focus on restrictions in supply that arise due to military competition with great powers while liberals could focus on impediments to free-flowing energy markets such as sanctions or trade restrictions. Similarly, in answer to the third question realists would be likely to emphasise the necessity of securing access to energy through increasing state military power and influence while liberals might focus on the need to establish bilateral or multilateral free trade agreements that promote free energy markets.

It comes as no real surprise that traditional discourses of energy security have focused particularly on fossil fuels and large-scale electricity projects due to their importance to the industrial development and, particularly, the military security of the nation-state, even in the South. The quest for this sort of energy security has barely progressed since the nineteenth century and it is still the main reason for many modern imperial interventions and conflicts (Stokes and Raphael 2010). This interpretation of energy security coincides with academic or government research funding opportunities, but it also fits neatly with the predominant large-scale and hierarchical, top-down development paradigm of ‘high politics’ prescribed by international financial institutions and adopted by governments around the world.

Some environmental security approaches treat energy security in this traditional state-centric manner, linking environmental degradation to a looming ‘energy gap’ particularly in relation to fossil fuels (Dupont 2001), a gap that is seen by some environmental security theorists, such as Homer-Dixon (2007), as the most
likely cause of future international conflict. A more critical energy security lens challenges the existing economic, political and technical assumptions that underpin traditional debates on energy production and consumption but it also challenges traditional notions of security that have the nation-state as their referent object. The recent history of security studies, and environmental security in particular, is characterised by the attempts of critical theorists and practitioners to challenge this state-centric assumption but energy security, due in large part to its singular importance to industrial and military activity, has proved particularly wedded to both the traditional security architecture and a focus on fossil fuels.

Despite this enduring emphasis, fuel wood continues to remain the primary energy source for most households in the less affluent global South (Calvert and Calvert 1999, 24; Shackleton et al. 2006, 481). Unlike studies from the North most studies of states in the South, even if they adopt a national focus, recognise the dominance of biomass as a fuel (Gunasekera and Najam 2003, 172). Economic development in China and other emerging economies has reduced this dependence but according to the International Energy Agency (IEA) over 1.4 billion people, many in Africa and South Asia, still live outside the electricity–fossil fuel nexus that the affluent North takes for granted (International Energy Agency 2010). As a result, in much of the South ‘renewable’ energy is not an ‘expensive luxury item’ but the only viable energy source of offer (Doyle 2008, 190). The difference in energy consumption patterns between the global South and North therefore highlights a pertinent contrast between renewable and non-renewable energy. Although a dominant view in the North sees poverty in the South as a significant cause of environmental degradation, the difference between energy consumption levels and the type of energy consumed means that energy security from small-scale renewable sources in the South can often be achieved more easily, and with less environmental impact, than with the fossil fuel or nuclear technologies deployed in the North.

Rather than focusing on the state, a critical energy security perspective relates more to the ability of individuals, particularly in marginalised or deprived communities, to secure access to sufficient energy for their personal needs. This approach draws on Barnett’s definition of environmental security that adopts a human security standpoint and focuses on the inequitable distribution of degradation resulting from unequal social structures; ‘[a] human-centred environmental security
concept places the welfare of the disadvantaged above all else’ (Barnett 2001, 127). This critical approach shifts the referent object of energy security away from the state to the individual and community and shifts the focus away from the North to the South. The shift in the referent object does not, however, necessarily result in a lack of analysis of state decision making but this analysis is undertaken only in relation to the impacts on the energy security of poor or marginalised individuals or communities rather than national energy security, which may, for example, prioritise the provision of energy to the military or associated industries. The state remains a potentially potent agent of progressive emancipatory change but it can also act as a regressive force, causing greater insecurity.

Energy security seen through the prism of a critical environmental security is not, however, considered a desirable goal if it is only achieved at the expense of other significant environmental insecurities. This potential trade-off, as with most environmental security issues, is most pertinent in the South where, for example, a project to build a large hydroelectric dam may supply electricity to local communities but may submerge the forest from which the community derives their livelihood. In the South, which is often characterised by varying degrees of authoritarian governance, these projects are frequently undertaken with little public consultation or public interest and the energy is often exported or sent further afield to satisfy large business interests or the military. In the context of climate change the burning of fossil fuels now undoubtedly brings adverse climate security issues later although the impacts are often geographically displaced and diverse.

Even in the short history of environmental security literature, however, there have been very few attempts to explicitly adopt a critical approach to energy security (see, for example, Mulligan 2011; Simpson 2007). It appears that many environmental security scholars have preferred to focus on ‘softer’ issues such as food and water that have traditionally been more closely aligned with human security within the development studies discipline rather than IR or security studies. Authors such as Deudney (1990) and Levy (1995) have challenged the usefulness of securitising the environment itself but energy has always been considered a security issue, although a ‘non-traditional’ issue compared with military security. The dominance of state-centred approaches to energy security may have shifted interested scholars towards alternative analytical frameworks, such as ‘energy poverty’
(Bazilian et al. 2010), a relatively new concept, primarily within the development studies discipline, that considers the energy access of households. Although this concept is gaining broader acceptance it is not a substitute for critical perspectives on energy insecurity, as it is not normative in its approach. Indeed, one of the characteristics of critical approaches to environmental security in general, and energy security in particular, is that they are predominantly qualitative in nature whereas energy poverty, by its very nature, is distinctly quantitative.

Outside of security studies and IR there has been another stream of academic work focusing on energy issues that could be grouped together under a green politics banner. Much of this work has advocated greater reliance on renewable energies, even before the emergence of the climate change discourse, and focused on questions of energy efficiency, energy sources and technologies, personal energy usage and lifestyle choice. Growing out of the environment movements of the 1960s and 1970s, this scholarship has examined local, national and global energy issues but has focused primarily on issues as they affect the North and has largely avoided using a security framework. To develop a critical energy security approach these various perspectives on energy are examined, beginning with an overview of the traditional state-centric model.

State-Centred National Energy Security Perspectives

Adopting the state as the referent object of energy security has historically been most clearly associated with realist or mercantilist schools of thought but a national energy security perspective also predominates within most liberal approaches. Traditionally there has also been a focus on energy security in the US and Europe but this has now shifted to Asia, and more specifically China and India (see, for example, Cole 2008; Li 2007; Luft and Korin 2009; Wesley 2007; Yergin 1993; 2011). Former US Secretary of State Henry Kissinger, an archetypal realist, argued that ‘aside from military defense, there is no project of more central importance to national security and indeed independence as a sovereign nation than energy security’ (Stulberg 2007, 3). Moran and Russell concur, arguing that ‘“[e]nergy security” is now deemed so central to “national security” that threats to the former are liable to be reflexively interpreted as threats to the latter’ (2009, 2). As a result they contend that energy security is the ‘one area of international life’ where large-scale conflict among developed states remains a possibility. As can also be surmised from national news
headlines and much extant energy security analysis, this state-centred energy security approach also results in a focus on fossil fuels, and primarily oil.

Michael Klare, a prominent realist whose approach to energy security draws on the broader resource curse literature (Klare 2012; Ross 2012), argues that diminishing energy resources, and particularly oil, are likely to cause severe and enduring threats to energy security and therefore national security from both regional competition for the control of energy resources and great power rivalry and conflict. From a US perspective the Carter Doctrine has dictated that any threat to the free flow of oil in the Persian Gulf is regarded as an assault on the vital interests of the US and would be repelled ‘with any means necessary’, including military force. The most obvious example of this policy was the first Gulf War in 1990 to oust the Iraqi army from Kuwait. Stokes and Raphael (2010) similarly argue that counterinsurgency aid and other foreign policies have supported oil-rich non-democratic regimes, protecting them from domestic uprisings or external threats in exchange for US energy security. From this perspective the Iraq invasion of 2003 was clearly about oil and energy security, as the Iraqi nationalised oil industry was restructured and essentially privatised through Production Sharing Agreements between foreign corporations and the Iraqi state.

A relatively liberal and more optimistic approach to energy security, although one still focused on state-driven industrial development, is adopted by Daniel Yergin, an oil industry insider whose ‘reasoned confidence’ in relation to energy security is based on what he terms the ‘globalisation of innovation’ (Yergin 1993; 2011). His two major publications have focused on the ‘epic quest’ of states to achieve energy security, largely through oil, although his most recent book examines renewable options, but they also demonstrate the narrow state-centric view of energy security that permeates much of academia and policy circles. Liberal-influenced approaches extend, however, from his rather narrow view of economically rational state-based decision making to include a greater emphasis on multilateralism that acknowledges the importance of states in driving global change but pursues the development of global institutions that transcend national interests as the means to achieve global energy security. As Lesage et al. note, ‘as long as energy security is viewed through national prisms, the concept is impracticable as a driving force for global collective action’ (Lesage et al. 2010, 38). Müller-Kraenner concedes, in a realist tone, that
‘[t]he gloves are off in the battle for the last resources; securing national energy supply has become the tough realpolitik for every country’ (2008, xi), but he then argues that a new world environment organisation and a global agency for the promotion of renewables must be established as the only feasible route to energy security. Realists argue that such liberal projects have little chance of success but, regardless of the various institutional structures employed, the choice of particular energy sources and technologies can themselves influence the structure of society and constrain the possible outcomes from the pursuit of energy security.

Energy Sources and Technologies

As mentioned above, most energy security analysis focuses particularly on fossil fuels; primarily oil, which dominates the military and transport sectors, but also natural gas and coal. Increasingly, however, renewable energies such as wind and solar are gaining importance in the global energy discourse due to the impacts of climate change and the security threats surrounding traditional fuel sources. Critical analysis of all these energy technologies, however, suggests that they underpin particular modes of thought in relation to the structure of society. Technology is not neutral (Kranzberg 1986), and it often ‘reflects and reinforces existing power relations’ (Curran 2006, 75). The socio-cultural appeal of sophisticated technological development is used by elites to garner support for controversial and expensive technologies in the traditional security field (Peoples 2010), and the preference for large and technologically challenging energy projects permeates much state decision making. Any critical analysis of energy security, therefore, should include some discussion of the intrinsic bias attached to given energy technologies (Mander 1996, 347-48).

Fossil fuel and large-scale hydroelectric energy technologies all favour large-scale industrial development and have centralising political and economic implications. The large-scale exploitation of fossil fuels ushered in the industrial revolution and a new scale of environmental destruction that was accompanied by the growth of energy companies on a similar scale; in early 2012 three of the four largest corporations in the world by market capitalisation (along with electronics giant Apple) were energy ‘supermajors’. Most modern electricity production, from fossil fuels or large-scale hydroelectric dams, favours large oil and gas and construction companies As Simpson argues: ‘the discourse of energy security is still employed by
government and business elites to justify top-down investments in large-scale energy projects, which require significant initial capital injections and subsequent industrial-scale capital returns’ (2007, 543).

Despite assurances to the contrary, the electricity from large dam projects is often too expensive for local or rural communities in the South who pay the same rates as wealthy urbanites (Liu 2005). Previous studies have demonstrated that the expected returns have been exaggerated and the impacts on communities and their environments understated (Barber and Ryder 1993; Hildyard 1998; Probe International 2006; WCD 2000). Indigenous peoples or those who live particularly close to the land, are often the worst affected by large dams as the land impounded for the dam is often forested and provides a livelihood for indigenous communities (Goodland 2006, 21; Newson 1997, 202). Various studies have demonstrated that the practice of ‘pork-barrelling’ is rife in the large-dam industry with widespread corruption both preceding the decision to build large dams and continuing during construction (Goldsmith and Hildyard 1984, 259-62; McCully 1996, 242-62). These corrupt relationships between governments and business are at the core of many of these problems associated with large-scale energy projects.

Electricity from fossil fuel sources in the South may also be too expensive for local communities unless it is heavily subsidised as they often pay at least international prices due to globalised energy markets. Despite the neoliberal orthodoxy, privatisations may exacerbate this situation. Beder’s study of electricity privatisation over the last century demonstrated that ‘publicly owned electricity enterprises have consistently provided electricity at no greater cost than privately owned enterprises, and often for prices far lower than those charged by private companies’ (Beder 2003, 326).

The industry that has developed around fossil fuel energies is also complicit in human rights abuses that have caused human insecurity in much of the South through its dealings with authoritarian or repressive regimes (Moody 2007). Examining such abuses John Ruggie, the UN Special Representative of the Secretary General on Human Rights and TNCs, noted that

the extractive sector – oil, gas, and mining – utterly dominates this sample of reported abuses, with two-thirds of the total … The extractive industries also account for most allegations of the worst abuses, up to and including complicity in crimes against humanity, typically for acts committed by public and private security forces protecting
company assets and property; large-scale corruption; violations of labor rights; and a broad array of abuses in relation to local communities, especially indigenous people (UNCHR 2006, at 25).

Furthermore, extractive corporations in the South may exacerbate political instability rather than contribute to equitable development by intervening in the political process to attain corporate objectives. Under certain circumstances, corporations may benefit from governance failures through non-enforcement of certain government regulations, or the ability to negotiate more profitable agreements with governments (Frynas 2005, 597).

In assessing these routes to energy security it should also be noted that the criteria that are used to measure the success of particular technologies are socially constructed and are set by a social subgroup, usually comprising the engineers and technocrats that benefit from adherence to the technology (Kline and Pinch 1999, 114). The governments and corporations who employ the technocrats, who broadly design and assess the energy technologies, generally favour the resultant increased centralisation of political and economic control. All these large-scale centralising technologies, however, have human and environmental costs that are rarely considered when calculating the cost of the energy produced, which can result in favourable comparisons with renewable and decentralised forms of electricity generation such as wind, solar and small-scale hydroelectric power (Douthwaite 1996, 184; Elliott 2010). The flexibility of these renewable technologies, even if they are linked into national electricity grids, provides opportunities to decentralise both electrical and political power, reducing dependence on central governments and large corporations (Mitchell 2008). While natural gas is a fossil fuel, it emits less greenhouse gases than other fossil fuels and is often seen as a ‘transitional’ fuel from coal and oil to a renewable energy future, particularly in combined heat and power generation plants (Elliott 2010). Natural gas can be amenable to small-scale power plants and can therefore promote decentralised energy production, as demonstrated in Azerbaijan (Sweet 2009), although the pipelines that are often used to transport the gas can cause social and environmental insecurities (Simpson 2008).

Despite shortcomings in the employment of these technologies, these sort of energy projects are touted by their proponents as the answer to Asia’s future energy needs, as the demand for hydropower and natural gas is likely to grow significantly (Asian Development Bank 2010; Biswas 2005, 80; Carroll and Sovacool 2010;
Kellow 2007, 203). Most countries in the region are, therefore, likely to be engaged in such projects in the name of energy security in the future so a new model of energy security may help marginalised peoples improve their long-term prospects of achieving environmental security. The issues of justice and sustainability are of central importance to critical scholarship and these concerns are explored further in the remaining sections which analyse three broadly critical approaches to energy security.

**A Critical Approach to Energy Security**

There is a broad range of potentially critical approaches to energy security but, as with many theoretical perspectives, its borders are fuzzy and ill defined. Mulligan has written recently on a ‘critical’ approach to energy security but he does not address issues specific to the South, where energy shortages are so prevalent, and he focuses on fossil fuels, and peak oil in particular. Although there are critical aspects to Mulligan’s analysis, in general oil is not primarily a critical concern; as Simon Dalby notes ‘oil is not a resource that the marginalised peasantry of the Third World are directly fighting over; it’s a matter of superpower competition’ (2009, 75). In one article Mulligan examines the history of connections between environmental security and energy security particularly in relation to fossil fuels. He argues that although with the rise of climate change in particular

> fossil fuels are now decidedly a principal threat to, rather than a component of, ‘the environment’ … [i]nternational agreements addressing other environmental resources may offer … models for dealing with a future of declining energy and climate security, without resort to ‘traditional’ mechanisms of conflict among the world's states. But such a shift in the practice of energy security necessitates a shift in the concept of security that, instead of emphasizing state-centered and military aspects, is grounded in discourses of global and human security (2010, 85).

In another article Mulligan examines the security literature more closely including the Copenhagen School’s concept of the ‘securitisation’ of issues, which may result in authoritarian responses by the state: ‘securitisation is thus a tool that enables states to take exceptional measures, including repression or the suspension of the public freedoms considered normal in the West’ (2011, 639).

While the Copenhagen School is clearly constructivist, and has broadened the security agenda away from the purely militaristic national security approaches, I argue that, despite its inclusion in this and many other ‘critical’ analyses, it is not readily identifiable as ‘critical’. As Browning and McDonald (2011) note, the logic of
security in the Copenhagen School is inherently pernicious while within the Welsh School it is inherently progressive. In comparison to the ‘panic politics’ that accompanies securitisation under the Copenhagen School, in the Welsh School approach ‘true security refers to the emancipation of the poor and disadvantaged’ (Floyd 2010, 48).

In applying this critical perspective to energy security the referent object shifts from the state to the individual and energy security is pursued provided it is not at the expense of other aspects of environmental security or the environmental security of other members of the political community. Despite this emphasis on the individual Newman (2010, 79) argues that the state remains the central provider of security in ideal circumstances while McDonald (2012, 52-53) notes that communities can play a further important role as sites for group identification and the pursuit of justice. I argue that the identification of individuals with particular communities, particularly if they are marginalised, allows a critical approach to energy security to be expanded to include a marginalised cultural or political community as a broader referent object, provided that community does not replicate the inequalities and injustices that characterise the wider society.

Another approach is adopted by Simpson (Simpson, 2007 #857) who analyses complex energy relationships in Southeast Asia and combines a broad critical international political economy approach with elements of critical security studies to ensure that energy security is a concept particularly focused on justice for marginalized individuals and communities in the South. Drawing also on Barnett’s approach to environmental security he examines the impacts of large-scale transnational energy projects in regions with marginalized and oppressed communities, particularly in Myanmar. These communities are faced with severe energy deficits, but they often see no relief when an energy project is completed. While the discourse of energy security is used to justify the project, communities living in its vicinity may remain without electricity following its completion and have other elements of their security, such as food, water or livelihood, undermined. In this situation it becomes pertinent to ask what is actually being secured by the project. Unfortunately, despite government protestations to the contrary, it is often the financial security of governing and business elites that determines project decision making at the expense of local communities’ environmental security. In addition, due
to the transnational nature of these energy projects the professed pursuit of energy security in one relatively affluent state may cause environmental and energy insecurities in another (Simpson 2007, 540). This critical security studies focus on the most marginalized communities has some similarities with an emerging ‘energy poverty’ concept.

**Energy Poverty**

From a security studies perspective Ciuta argues that ‘the story of energy security is relatively straightforward … energy insecurity is the product of the contradiction between a general trend of increasing energy consumption and a contradictory trend of decreasing energy reserves’ (Ciuta 2010, 126). This definition, however, assumes national or global concerns and a focus on the relatively affluent. In the case of many communities in the South ‘increasing energy consumption’ in their communities is hardly part of the problem at all. A critical approach to energy security could therefore link energy insecurity to ‘energy poverty’, which avoids the state-centric assumption through a direct focus on households. Although a fringe energy issue compared with national energy security, for policy makers the energy poverty concept is gradually gaining acceptance in national and supra-national fora including at the EU level where, despite its overall wealth, member states such as Bulgaria face considerable problems at the ‘energy affordability-social inequality nexus’ (Bouzarovski et al. 2012).

Energy poverty can be defined as a condition wherein a household is unable to access energy services at home at a materially-necessitated level and usually includes a lack of regular access to electricity and a dependence on the traditional use of biomass for cooking and heating. Almost one third of the world’s population uses this sort of biomass for cooking and energy, and business-as-usual assumptions about access over the next two decades suggest that the absolute number of people in energy poverty is likely to remain static (Bazilian et al. 2010). Energy poverty as a concept appears more closely related to development studies than security studies or IR but viewing energy security from a critical perspective results in a more human-centred security approach that could clearly encompass energy poverty. As might be expected from its development studies lineage, however, energy poverty tends to be far more quantitative than most critical theoretical analysis; it provides specific daily energy
consumption quantities, depending on social and environmental requirements, while
critical analysis tends to focus more on challenging social and political structures.

Nevertheless, energy poverty can be useful in highlighting areas where critical
analysis might be most useful. For instance a study by Pachauri et al. (2004)
estimated that at the turn of the century 30 per cent of the population of India was
‘energy poor’ – lacking access to modern energy sources and consuming amounts that
only provide minimum services – but another 15 per cent was ‘very energy poor’,
consuming less than enough to cook two meals per day and basic lighting. In this case
energy poverty data and analysis, though limited in its utility, can still be employed
by critical analysts to address entrenched social and political inequalities.
Unfortunately, in many countries of the South this level of data is not available but for
countries of regions where it is it may be usefully deployed in a critical analysis of
energy security.

Green Politics and Energy Security

The last perspective that contributes to a broadly critical approach to energy security
is a ‘green politics’ approach to energy security. Barnett’s green politics approach to
environmental security, although not focusing specifically on energy security,
criticizes the assumptions that underpinned the post-Second World War notion that
‘energy security is [simply] the theory and practice of securing energy for the nation-
state’ (2001, 34). It is clear that the pursuit of a national energy security that
encompasses large-scale industrial consumption of fossil fuels – which has resulted in
wars fought over resources and the development of a military-industrial complex in
many states – often undermines the goals of green politics, particularly in the South.

Although there has been limited academic writing on energy from a security
perspective in the green literature, partially because of the militaristic and statist
connotations that it traditionally evokes, there has been much written and done in the
green and environmental movements more broadly that attempts to address issues of
energy demand and supply. Much of the recent writing in this area is couched in
terms of mitigating climate change (see, for example, Diesendorf 2009), but there is
also a vibrant global activist community that promotes energy efficiency and
renewable energy sources as part of a broader shift towards an ecologically conscious
lifestyle born out of the New Age and alternative community movements of the 1970s in the North (see, for example, Douthwaite 1996; Pepper 1991).

Much of this green alternative energy movement is influenced by the writings of E.F. Schumacher who promoted human-scale technologies instead of the large-scale industrial technologies identified above:

Experience shows that whenever you can achieve smallness, simplicity, capital cheapness, and nonviolence, or, indeed, any one of these objectives, new possibilities are created for people, singly or collectively, to help themselves, and that the patterns that result from such technologies are more humane, more ecological, less dependent on fossil fuels, and closer to real human needs than the patterns (or life-styles) created by technologies that go for giantism, complexity, capital intensity and violence (1979, 57).

In his most influential book, *Small is Beautiful*, he argued for a Buddhist approach to economics that took into consideration the fundamental difference between renewable and non-renewable energy sources, with non-renewables to be used only if they are indispensable and with ‘meticulous care for conservation’ (Schumacher 1973, 55). While the drivers of the contemporary societal shift towards renewable energies and energy efficiencies are not primarily the alternative lifestylers, but more hard-headed national concerns such as economic efficiency, national economic security and global climate change, there is little doubt that the technologies and approaches that have facilitated this shift have emerged from within the environmental movements of the last four decades. As noted above, however, technologies are created by particular philosophies and while these philosophies usually infuse the society that develops the technology it is possible that technologies can change the society. As the South attempts to catch up with the energy consumption of the North, local and transnational activist communities are encouraging more sustainable and less environmentally destructive modes of energy production but persistent authoritarianism in some regions makes this activism difficult. Critical notions of energy security are therefore bound up with green political theories that emphasise participation and democracy.

**Conclusion**

This paper has demonstrated that although energy security can be defined and interpreted in many ways, due to the economic and military importance of energy, and particularly oil, to the modern nation-state, it has until recently been considered an issue primarily about, and of concern to, states. Unlike other aspects of environmental
security this lineage has ensured that energy security has been discussed widely within broader politics and IR discourses, particularly since the 1970s. By applying broadly critical principles to the concept of energy security this paper has proposed an alternative approach that focuses on the energy security needs of marginalised individuals and communities. This model avoids the unhelpful segregation of energy needs from other basic environmental services by embedding it in a broader concept of environmental security. In this approach energy security is not considered in isolation; energy security is only pursued if it is not at the expense of other insecurities, such as food and water. Although there are inevitably some adverse environmental impacts that arise as a result of energy extraction, a critical approach argues that it should not be the poor and marginalised that bear the brunt of any trade-offs, as is often presently the case. From this critical approach, the nature of energy technologies and sources must also be assessed, to ensure that local communities benefit overall and that it does not precipitate the displacement of environmental insecurities to other communities.

This critical approach to energy security prioritises justice, equity and sustainability and provides an alternative to the traditional definitions of energy security associated with militarism, wars and unsustainable, unnecessary and inappropriate levels of industrial development. In addressing the three fundamental questions relating to security – ‘for whom?’, ‘from what threats?’ and ‘by what means?’ – this critical perspective shifts the referent object to individuals and marginalised communities and highlights injustices in existing social and political structures that institutionalise inequality. The answer to the first question therefore focuses primarily on the individual, the answer to the second is the threat to adequate energy supplies due to unjust social and political structures, and the answer to the third is the political and economic reforms that eliminate these structural inequalities.

Although severe energy and environmental inequalities exist in the North, most critical energy security analysis is likely to focus on the South, where insecurities and injustices are most prevalent, and the concept of energy poverty may be increasingly employed to supplement this sort of energy security analysis. In alleviating energy insecurity, however, the nature of energy technologies and sources must be assessed to ensure that the pursuit of energy security is not at the expense of other insecurities, such as food and water, and does not precipitate the displacement
of environmental insecurities to other communities. This sort of critical approach to the current concept of energy security is badly needed as it is becoming increasingly apparent that the extraction and use of traditional sources of energy at current rates is socially, economically and ecologically unsustainable.
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