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Dams, political framing and sustainability as an empty signifier:
The case of Belo Monte

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Abstract
Contests over the construction of hydroelectric dams have often involved a prolonged contest over the role of such infrastructure, the consequences of its construction, and the relationship between the opponents and proponents of such schemes. Various storylines and meanings are adopted by both the pro- and anti-dam coalitions, with these representations of dams open to both reinvention and transformation. This paper explores the fluidity of such framings by analysing the adoption of a language of sustainability in the presentation of the Belo Monte dam in Brazil by the proponents of the scheme. By adopting Ernesto Laclau's and Chantal Mouffe's discourse analytic framework, this work will explore how supporters of the Belo Monte project have integrated narratives of environmental sustainability into the positioning of the facility. Following recent scholarship, this work casts these appeals to sustainability as a hegemonic tool that seeks to further legitimate construction. In doing so, it will assert that the ambiguity – or emptiness – of the concept of sustainability has allowed for the proponents of Belo Monte to adopt such a storyline as a means to legitimise the construction of mega-dams in the Amazon region, while veiling the negative social and environmental consequences of such projects

Words:

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The politics that surround the construction of a dam are often characterised by an unending chain of confrontational interaction between the dam's proponents and opponents. Central within these contests is the role of political framing and its use to define hydropower projects and their wider consequences, with both pro- and anti-dam groupings often seeking to legitimise or delegitimise such schemes. The storylines used to frame the discussion and debates surrounding water projects provide an important political tool, allowing for the shaping of popular understandings of such schemes, their benefits and consequences and their wider role within processes of development (Ahlers et al. 2014; Bichsel 2016).

Such narratives often appeal to certain discourses as a hegemonic tool to tie the project to wider social, political and economic storylines as a means to legitimate construction. This practice enrols the dam into wider sociopolitical questions and agendas, allowing for the scheme's justification and legitimation at a number of levels and within numerous storylines of developmentalism, statehood or security (Crow-Miller 2015). Negative consequences, such as displacement, may become reframed as positive (Johnson et al. 2015) and opposition movements may be both marginalised and trivialised by pro-dam coalitions (Baviskar 1995). By exploring these structures, research can develop an understanding of the contested nature of dams and their consequences, and how such contests possess an important ideational nature.

The aim of this paper is to explore how recent Brazilian governments have adopted narratives of sustainable development as a means to legitimise the construction of Belo Monte, a mega-dam in the Amazon region. Located in the northern state of Para, Belo Monte will provide up to 11 233 megawatts (MW) of electricity and become the world's fourth largest dam on its completion. The dam, entering operations at the time of writing, is titanic in all of its elements, from the initial budget of 28.9 billion Reais (US$14.4 billion) to the controversy that surrounds it.

The meanings and representations of dams often have histories that are located in wider understandings of power, but these histories are not fixed within a single worldview or political project. Instead, they are always open to reinvention and transformation. This paper will assert that the framing of Belo Monte is demonstrative of such a reinvention, with proponents of the project adopting sustainability as a political frame, in an attempt to grant the dam legitimacy. This process will be explored by adopting Ernesto Laclau's and Chantal Mouffe's discourse analytic framework as a vehicle to understand how appeals to sustainability – characterised as an empty signifier – have served as a tool of articulation to tie the dam to wider storylines and further legitimate the construction of Belo Monte.

The role of post-Marxist discourse theory

The post-Marxist discourse theory provided by Ernesto Laclau and Chantal Mouffe (1985) and the wider Essex School (Howarth 2000; Howarth et al. 2000; Howarth and Torfing 2005; Jørgensen and Phillips 2002) is of particular value in the analysis of such processes because it allows for a theorisation of the ways that storylines surrounding dams compete to become partially fixed – or hegemonic – allowing ideas or meanings to be elevated to a realm of social significance, while asserting the continued need to foreground such analysis within wider struggles over interpretation and identity.

Within this understanding, an act of political framing is constructed both in and through struggles to entrench understandings via the articulation of both meaning and collective identity. This process of

articulation links together previously unrelated and unfulfilled social and political demands into a wider chain, joined by the discursively-produced link (or equivalence) between each point (Laclau 2005). The practice of articulation allows for the (partial) organisation of discursive structures around a central signifier or reference point – or nodal point (Laclau and Mouffe 1985). In doing so, a particular system of meaning can be bound together, allowing for the (re)assignment of certain meanings to other signifiers within that discursive structure. It is via the process of articulation that nodal points (such as 'Nation' or 'Sustainability') can be bestowed with new meaning in relation to a wider signifying chain. Significantly, this process is not only rooted in the role of language. It can also be found in the material context that provides such actions with meaning. For example, the physical design of this infrastructure often invokes certain images and can be perceived as a discursive act of articulation. As Maria Kaika (2006) has argued, the Marathon Dam in Greece was designed with neoclassical ornamentation as a means to architecturally link the dam (and the modern Greece that it was deemed to represent) to the history of Ancient Greece

This articulation is hinged on the attempt to construct a hegemonic identity or meaning, unifying a discursive space and providing a credible route to understanding events and processes (Howarth and Torfing 2005). In making such an argument, discourse theory draws from the notions of hegemony developed by Antonio Gramsci, who argued that a ruling grouping is provided with the legitimacy of leadership and control over subordinate groupings through 'bringing about not only a union of economic and political aims, but also intellectual moral unity' (Gramsci 1971, 182). Within this reading, articulatory practices of pro-dam coalitions provide a process in which the consent of the population – at the local, regional and national levels – is procured and the pro-dam vision of the infrastructure is both projected and consolidated within the popular understanding

Yet, the overarching assertion of this framework is that this closure cannot be fully reached and that meaning can never be entirely fixed – opening up a route for the continued struggle over definitions of both society and identity (Jørgensen and Phillips 2002). This lack of discursive closure and failure to fix a defined meaning results in a continued possibility of counter-hegemonic narratives. This antagonistic nature is rooted in selfdefinition via the delineation of an other that blocks the successful hegemony of an identity. This, in turn, allows for the creation of coalitions – joined by equivalent interests and common needs – and a frontier between such groupings engaged in competition. As Mouffe has stated, 'To construct a "we" it must be distinguished from the 'them,' and that means establishing a frontier, defining an "enemy"' (1993, 69). The conceptualisation of social antagonism provides an important task for analysis – to detect and describe the ways in which the identities (and, with them, interests) of agents are limited by the presence of each other – and to explore how these obstacles can be constructed in antagonistic terms. Not all articulations are peaceful but may instead involve discursive repression – such as the negation of identity, alternative meanings and those who subscribe to such worldviews (Torfing 1999).

It is this element of antagonism that provides the foundations of competing coalitions of identity and meaning (Laclau and Mouffe 1985). Knowing that the meanings that exist around the construction of hydraulic infrastructure occur via a process of framing, research can understand which images of Belo Monte are produced by pro- and anti-dam groupings. It is through these respective framing devices that the proponents and opponents compete in a contest for hegemony, seeking to bestow the project with legitimacy or to strip such acceptability away. With the Belo Monte project having extended over a period of decades, we can understand the scheme as representative of a changing set of social practices, constructed by the constant renegotiation of the facility's meaning (Santos and de Mello 2014). Two discursive identities can be found – those of the prodam coalition and the resistance of opposition movements. The opposition coalition against dam construction in Brazil has consisted of affected

populations, national and international civil society groups, members of the Catholic Church and researchers – all engaged in a prolonged campaign of advocacy against the dam's construction. This grouping is characterised by a plurality of interests, with constituents opposing the dams on the grounds of environmental health, social displacement or cultural destruction. The pro-dam coalition can be characterised as formed of the construction companies involved, the Ministry of Mines and Energy, federal and regional electricity authorities (i.e. Eletrobras and Eletronorte), commercial and industrial actors and national politicians from a number of political parties.

The project is bestowed with meaning via processes of articulatory practice by these groups. The pro-dam and resistance coalitions strive to fix the meaning of a certain sign (the dam) by placing it in particular relations with others (e.g. notions of development, environment and statehood). Within this conceptualisation, the discursive struggle over Belo Monte becomes the limitation of alternative visions of the facility, both within and through struggles to entrench particular understandings of the infrastructure via the articulation of both its meaning and ties to collective Brazilian identity (Howarth and Torfing 2005; Jørgensen and Phillips 2002). With these pro- and anti-dam factions always seeking the (provisional) hegemony of a prescribed particular meaning or identity related to Belo Monte, the coalitions seek to articulate numerous meanings and demands within their adopted discourses. This allows for the wider articulation of the project into an ever-greater chain of social demands and meaning.

As a term becomes linked to a wider set of demands – and its identity or meaning becomes hegemonic – it finds itself emptied of its original significance. It becomes an empty signifier – a term that does not point to a specific object or agreed meaning. This allows for an important fluidity, with a term or concept becoming linked to various, often diverse understandings. For example, the widening of the term development has resulted in its distillation into a catch-all term that applies to a variety of assumptions (i.e. economic development, human development) surrounding social progress (Rist 2007). The hegemony of the term has become apparent in its ambiguity – it becomes an empty concept, argument or identity that possesses no real fixity of meaning (Laclau 2005).

Sustainability as an empty signifier

Although sustainability has remained a contestable – and contested – term, its historical development has seen it become gradually stripped of its meaning, resulting in the nullification of its previous attachment to specific environmentalist identities and allowing its use to represent the concerns of a diverse group of stakeholders (Brown 2016). The language of sustainable development demonstrates this point, with the concept introducing a narrow understanding of issues of environmental sustainability and poverty alleviation, while continuing to reassert the centrality of continued economic growth (Adams 2009; Brown 2016). This is not to dismiss the viability of sustainability as a term, but can instead be understood as an opening up of how notions of sustainability have been used to legitimise schemes with questionable environmentalist credentials.

The definition of sustainable development provided within the 1987 report of the Brundtland Commission – understood as an attempt to reconcile environmentalism with the status quo, or the continued pursuit of traditional economic growth – has become partially hegemonic. The result is the product of a partial discursive closure, in which traditional criticisms of development have been coopted into the term's renegotiated meaning, and bridged with concerns related to environmental health (Rist 2007). The work of Laclau and Mouffe (1985) show us that the successful hegemony of such meaning allows for its emptying – and, therefore, its ability to represent conflicting assumptions and storylines. In doing so, the notion of sustainability has provided a fluidity of meaning, under which any number of social, economic and ecological concerns can be articulated (Brown 2016).

It is this all-embracing nature that forms an important function of an empty signifier (Laclau 2005), with the signifier able to retrospectively classify concerns as part of its character. As a result, 'sustainability' becomes impossible to accurately define, allowing for an important malleability (Davidson 2010; Brown 2016). It is this malleability that has allowed the projection of a number of interests into popular understandings of sustainability (Kates et al. 2005). The fluidity of the term – and its departure from more traditional notions of environmentalism – has allowed for its application to schemes that would not have previously been understood as representative of notions of sustainability. It is this malleability and process of co-optation that can be found in the case of the Belo Monte dam in Brazil.

The case of Belo Monte

This work argues that the proponents of Belo Monte dam can be understood as a coalition engaged in a process of political framing that seeks to characterise the hydroelectric complex as a sustainable. The statements explored have been collected from a number of sources, including the records of speeches given at the Brazilian C^amara dos Deputados (accessed from the institution's transparency portal, see: http://www2.camara.leg.br/), political speeches provided outside of this setting and news articles published on government portals. The public nature of these sources allows for their characterisation as communicative devices of framing, constructed as a means to further enrol members of the public into a pro-dam coalition that supports Belo Monte. Subsequent analysis is based on translated source material and, as a result, the focus will not be on lexical choice but will instead present these sources as evidence of the attempt to frame the Belo Monte dam as an infrastructure characterised by its sustainability credentials

This framing of Belo Monte as a sustainable project has been present since the 1980s and can be understood as a response to global environmental awareness. When Belo Monte's predecessor-project, Kararao, was cancelled in ^ 1989, due to concerns from the affected indigenous populations, these environmentalist critiques provided an important opposition framing. Jose Antonio Muniz Lopes, a proponent of Belo Monte since the 1980s, has recently argued 'In the 1980s, this matter, called the environment, arose. Before then, it never came up' (in Leite et al. 2013, np). Since 1989, the 1992 Rio Earth Summit and the decades after have resulted in the continued public awareness of issues of environmental health and climate change. As a result, the growing awareness of such issues has allowed the proponents of the Belo Monte to frame the scheme as an energy project characterised by its sustainability (Bratman 2014).

A key part of this frame of sustainability is the prescribed exceptionality of Belo Monte when compared with previously-built complexes. This is with a particular reference to the significance of environmental protection concerns within the planning process. In response to opposition references to previous dams – such as Tucuruı and Balbina, famed for their extensive social and environmental consequences – the Brazilian government has highlighted the improved design of Belo Monte. The dam's designs were altered in the early 2000s as a means to reduce the size of the reservoir, resulting in the abandonment of a number of subsidiary dams and the re-design of the Belo Monte as a run-of-the-river project. This recalibration is evident in the framing of the project by its proponents. Former president (2003–2011), Luiz Inacio Lula da Silva, who argued in a speech at Altamira:

> Let us use clean energy and preserve the environment. This is my commitment ... We do not want ever again a hydroelectric plant that commits a crime of insanity such as Balbina ... We don't want to repeat Tucuruı, we want something new. (2010, np)

This commitment echoes the words of Federal Deputy and architect of the Belo Monte Bill, Fernando Ferro (PT-Pernambuco), who had previously argued that this design change allows for 'this hydroelectric project ... [to] be undertaken in compliance with our political, social and environmental responsibilities' (2005: 32487).

The complex has often been depicted as the only alternative to the continued burning of fossil fuels, and the associated issues of pollution. In 2012, the then Minister of Mines and Energy, Edison Lobão, argued that 'Plants like Belo Monte have been designed to minimise their impacts, and they will allow Brazil to go forward with a power network that boasts minimal emissions' (Eletrobras 2012, np). Federal Deputy for Ceara, Chico Lopes (2011: 17043) further articulated this link when he argued that 'The Brazilian government must ... continue with the construction of the Belo Monte hydroelectric plant ... for it is a clean and renewable energy source that will prevent future non-green energy sources from being used.' This dichotomy between hydropower and fossil fuels echoes the words of Fernando Ferro, who argued that

> If we do not build hydroelectric plants, we shall have to follow other paths: using nuclear energy, using thermal energy, and generating energy from fossil fuels, thus increasing greenhouse gas emissions, which will cause significant losses to our differential of generating clean energy. (2010: 15152)

These proclamations of Belo Monte as representing sustainable and 'clean' energy allow for the creation of links between the project and wider discourses of climate change mitigation and renewable energy. As a result, these issues are reduced to a signifier that provides the project with further legitimacy.

Belo Monte is described on government websites as meeting the Brazilian government's objective of producing 'clean, renewable and sustainable energy to ensure the country's social and economic development' (Brazil Portal 2016, np). Alternatives are discarded, with the focus firmly on the significance of Belo Monte's hydropower for future Brazilian energy matrixes. In a 2011 interview with the national newspaper, O Globo, Jose Antonio Muniz Lopes argued that Brazil 'would not have another power source capable of generating 4500 megawatts (MW), except for oil burning plants' (Oliveira and Lopes 2011, np). Further to this, Fernando Ferro later argued in the Brazilian Congress, 'Do not come to me to talk of using wind or solar energy to replace Belo Monte ... it would be necessary to deforest approximately 100 kilometres of the Amazon rainforest to install, in that location, wind farms' (2011L 62125). The focus is often on the emission of carbon dioxide and the absence of such emissions from hydropower when compared with other energy sources. Rogerio Cerqueira Leite, a former engineer, writing in a Folha de S~ao Paulo editorial, asked 'Do these environmentalists not realise that they leave no alternative to the country except [for] the use of fossil fuels, which will inevitably lead, albeit in the long term, to the desertification of the Amazon, among other disasters?' (2010, np).

Importantly, these narratives of Belo Monte as a sustainable project are lent credence by international policy, with hydropower often constructed as a renewable source of energy. Hydropower complexes continue to be able to secure Certified Emission Reduction (carbon credit) certificates (CERs), under the Clean Development Mechanism (Article 12, Kyoto Protocol). These embraces of the understanding of hydroelectric dams as a form of clean energy provide further legitimacy to the production of Belo Monte's green credentials (Bratman 2015; Fearnside 2006)

Furthermore, appeals to sustainability tie Belo Monte to the global image of Brazilian environmentalism. The project's construction has occurred in a period in which Brazil has emerged as a global

environmental leader, playing a prominent role in international discussions surrounding sustainability, climate change and deforestation. As a result, the Brazilian nation's environmental credentials are often understood as both established and significant in the construction of Brazilian nationalism and statehood. An illustration of this can be found in the opening ceremony of the 2016 Olympics in Rio de Janeiro, in which an environmentalist narrative was present throughout the city and country's production of itself (Dennis 2016). With polls providing evidence of a growing environmentalist consciousness within the Brazilian population (MMA 2012), the framing of Belo Monte as a sustainable project has enabled its location within national sustainable development agendas. This comes at a time when a number of recent government bills have threatened further encroachment into the Amazon (see PEC 215/2000), national rates of deforestation have accelerated (de Espindola et al. 2011) and the sanctity of protected areas is increasingly questioned (Bernard et al. 2014). Furthermore, with the killings of environmental defenders in Brazil making headlines (Global Witness 2016), it becomes increasingly difficult to reconcile the constructed image of Brazilian sustainability with the reality.

Neglected consequences

It is significant that the sustainability framings found in this analysis provide a conditional appraisement of Belo Monte, resulting in the neglect of a number of the scheme's consequences. The characterisation of hydropower as sustainable is conditional, being linked to discussions of emissions, rather than local grievances related to habitat destruction and the loss of livelihoods. Such assertions of sustainability conflate hydropower's role as renewable energy with an image that denies the wider environmental repercussions of mega-dam construction. These claims of clean energy have been subject to multiple constructions, with such claims disputed within research (Magalh~aes and Hernandez 2009; Liermann et al. 2012; Fearnside 2006). There remains a neglect of the cumulative effects of dams on deforestation, methane emissions and repercussions of biodiversity in the assertion of the dam as clean energy (see: Cunha and Ferreira 2012). Similarly, the social consequences of the project have also provided a particularly important route for opposition critique of the Belo Monte project (Irigaray 2014; Millikan 2014). The population of Altamira has increased by close to 30 per cent (Grisotti 2016). Such a population influx has caused extensive issues and a number of controversies, with larger numbers straining local infrastructure, increasing rents and living expenses, and leading to increased violence and social problems in the region (Leite et al. 2013). Furthermore, a dominant criticism can be found in the lack of participation of the communities affected by the project within the project's planning and approval, as evident in the 2011 action of Inter-American Court of Human Rights (IACHR), which called for a cessation of construction and asserted that the planning process of Belo Monte had failed to secure the Free, Prior and Informed Consent (FPIC) of the communities affected. Lastly, the location on the Belo Monte complex in the current Lava Jato corruption investigation that has engulfed Brazilian political society has exposed the relations between the construction companies involved in the Belo Monte project and the political parties that have ensured its development (Agostini 2016).

This use of a language of sustainability to legitimise the Belo Monte project represents the traditional definition of sustainable development: with economic development able to coexist with environmental concerns (Bratman 2015). As a result, it is tied to wider understandings of both environmental sustainability (and the understanding of hydropower as part of such a notion) and Brazil (as possessing established environmentalist credentials). This represents the leverage of sustainability framings as a means to legitimise a project that is ostensibly environmentally damaging. The term becomes emptied of its meaning and is harnessed to support a project and legitimise the damage caused, as well as conceal its links to the politico-commercial atmosphere in which it was built.

Concluding Remarks

The proponents of Belo Monte have adopted a variety of storylines in an effort to legitimise Belo Monte, but the frame of sustainability has proven particularly effective. The positive environmental connotations of construction have been articulated by the project's supporters, while the scheme's negative consequences have often been concealed by such an articulation. In doing so, we can understand that these hegemonic articulations of sustainability and sustainable development represent an outcome of a political struggle by existing powers to stabilise their dominant position, in the face of issues of sustainability (Brown 2016). As Bezerra et al. (2014) have argued, these strategies of framing can be understood as an attempt to secure a form of moral legitimacy in the face of a continued opposition critique. Within the case of Belo Monte, sustainability has been deployed as a means to reinforce the contemporary political condition, and the continued use of technocratic solutions.

Yet, this framing restricts understandings of the Belo Monte project from exploring how this sustainable development is experienced on the ground. This use of a language of sustainability framing is conditional and, as a result, it has neglected several social and environmental repercussions of this project, such as the destruction of traditional communities and livelihoods, uncontrolled migration and subsidiary deforestation. This neglect of the more negative effects in the pro-dam framing provides a window for future opposition to dispute this portrayal of Belo Monte as sustainable – by incorporating a counter-frame of social needs, socioenvironmental justice and economic opportunity into a pro-dam understanding that currently remains focused on environmental limits.

As Laclau and Mouffe (1985) have argued, the hegemony of a meaning is never closed and secure. Instead, it is always open to counter-hegemonic practice. Despite the powerful interests advocating for the project's sustainability credentials, this understanding – although currently successful – will remain only partially hegemonic. This allows for a possible re-articulation of this characterisation. As a result, the challenge becomes not only to enter into opposition against the dam itself, but also to dispute its transformation into a sustainable project.

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