



Valuing infrastructure

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Abstract. This chapter traces the competing financial and social valuations at play in the developmental worth of large-scale infrastructure projects, as well as the competing discourses used to justify them, using a case study of the ‘Back of Port’ expansion in South Durban. The chapter begins by exploring the competing logics of value articulated both in support of, and opposition to, a major port expansion and development project. The financial and economic logic of creating a fixed built asset to generate derivative income streams for investors, cheaper costs for shipping companies and expanded wharfs for the oil and natural resource export industries, is here juxtaposed to community views of the worth of the homes, social assets and heritage sites which would be displaced to make way for the port expansion. The case study is an example of competing orders of worth (Boltanski and Thevenot 2006): one abstract and derived from formal calculations of economic growth and multiplier effects; the other social and developmental and, in this case, largely absent from official debate. This chapter problematises any simple relationship between large-scale infrastructure and developmental benefit, arguing that the benefits to investors are the only guaranteed return in this project design. The valuation of the proposed port expansion is shown to prioritise profits at the international, rather than the national, scale, thereby shifting the benefits of infrastructure in favour of the (further) privatisation of profits offshore, while socialising the costs onshore. The chapter further argues that conventional development economics has difficulty grasping the value of such large-scale infrastructure projects in social terms, primarily because it occludes the issue of scale. Assuming a national frame of much-needed Foreign Direct Investment (FDI) leads to a failure to account for the future financial, social and ecological costs of infrastructure builds.

Introduction

For several years now, a major expansion of Durban, South Africa’s port, has been in planning. Proposed by Transnet, eThekweni Municipality and the Government of the Republic of South Africa and using the land of neighbouring Indian farmers, this multi-billion rand infrastructural development project would entail a major artificial ‘dig-out’ port on the site of the current disused airport. It also involves expansion and deepening in the existing bay-head, the building of new wharfs, the construction of a new oil and petrochemical transport and storage facility, possible expansion of the two existing refineries

and linking to a new major transport corridor and pipeline to Johannesburg. The plans entail substantial environmental disruption, including the destruction of an estuarine sandbank of particular importance to spawning fish, frogs and birds, and necessitating the demolition and relocation of the residents of surrounding neighbourhoods, including the historic Clairwood and parts of Wentworth and Umbilo. While for the powerful actors supporting the port expansion, the project's value is expressed in terms of development, economic growth and job creation, as well as international competitiveness in a global economy, the plight of those who will be displaced is seen as unfortunate at best and forgettable at worse. This is a 'keyhole-type' case study to explore how financial and social valuation practices compete in relation to an infrastructure project.

The African Development Bank, through its Programme for Infrastructure in Africa brochure, summarises the general 'case for' infrastructure in Africa as follows:

'Closing the infrastructure deficit is vital for Africa's economic prosperity and sustainable development. Improved infrastructure would facilitate increased intraregional and international trade, reduce the cost of doing business and enhance Africa's competitiveness within itself and in the global economy as well as act as a catalyst to Africa's economic transformation and diversification through industrialisation and value addition and sustainable and inclusive growth.' (PIDA, n.d.)

Major speeches in support of the port expansion, including by the then Minister of Finance in Clairwood in 2012, borrow from all these signifiers and axioms. All the key tropes of neoliberal economics - growth, competitiveness, inclusiveness, sustainable development and so forth – are on display in the case for the value of the 'back of port' (BOP) expansion, as the collection of separate but related projects became known, expressed by these political leaders and mainstream economists. Meanwhile, a loose environmental opposition, most active between 2012 and 2016 (when the plans were postponed), featured the South Durban Community Environmental Alliance (SDCEA), groundWork (Friends of the Earth South Africa) and BirdLife SA as central nodes. Opposition to the BOP expansion counter-posed the promotion of the values of inclusive, people-centred development, ecological justice and environmental sustainability. Instead of shaping into a neat binary with big capital and government facing-off against environmentalists and residents however, the articulations of value in this case were multiple, often contested, fragmented, temporary, and variously substantiated. The promise of employment, a much-vaunted element of the BOP plans and regularly lauded by ANC-affiliated politicians, had a beguiling effect in an otherwise economically disadvantaged community, despite the widespread destruction of homes that would accompany it.

Theorising infrastructure

In each of the case studies funded under the "Human, non-human and environmental value systems: an impossible frontier?" research programme, material infrastructures play a role in the valuation practices and performative values under consideration. This is not surprising, of

course, if one takes systems of accounting through which economic valuations are achieved as infrastructural forms (e.g. Mennicken and Sjögren 2015). However, even leaving aside these accounting infrastructures, our various case studies also involve infrastructures in the more traditional sense of the term. These range from large, fixed assets such as ports and irrigation systems, to the more dispersed material artefacts of modern governance associated with international aid bureaucracies and national healthcare systems, and the material networks of cables and servers that enable the hyperflows of contemporary finance. Moreover, despite the wide range of infrastructural forms involved in our various cases, in all of these, infrastructure is not merely incidental – one of many socio-material actants in an assemblage – but plays a distinct role in the valuation processes.

While space restrictions do not allow a full examination of the relationships between value and development across the relevant cases in this volume, in this chapter we use Durban’s proposed BOP expansion as an exemplar to explore the heterogeneous relationships between value and infrastructure in the development field. The chapter begins by situating Durban’s BOP expansion within the larger institutional assemblages and narratives through which new infrastructure is framed as essential for development in Africa generally and South Africa in particular. To demonstrate how infrastructures shape the possibilities and realities of value, we explore three related avenues here: first, the durable materiality of infrastructural forms; second, the affectual attachments that infrastructure can inspire; and third, the feedback loops within structures of power and political economy that link powerful political and economic actors with powerful infrastructures. A concluding section reflects on the emergent *dispositif* of infrastructure and value in Durban.

Development value, Africa’s ‘infrastructure gap’ and Durban’s proposed port expansion

Since 2008, the issue of the infrastructure gap has come to the fore in Africa, in discourse if not in direct material form. In July 2012, just as the Rio +20 Earth Summit for Sustainable Development was hitting the headlines from Brazil, the huge *Infrastructure Africa* conference was also taking place in Johannesburg. Somewhat ironically, the first was focused on debating the curbing of carbon emissions to avert further global warming, while the second, using much larger proposed budgets and personnel, was in the process of committing African governments to decades more carbon emitting fossil fuel-based infrastructure for cars and coal mines, aviation expansion and container shipping. Indeed, in Africa it appears that the only thing more ‘much-needed’ than foreign direct investment (FDI) is infrastructure, with the World Bank promoting the view that there is a financing ‘gap’ worth a wide range of apparently vast sums of money – cited as USD 93 billion per annum in 2012 in the run-up to the Infrastructure Conference (Nepad Business Foundation 2012). The African Development Bank and African Union Programme for Infrastructural Development in Africa (PIDA) estimated (in typically titled press release “Closing the Infrastructure Gap vital for Africa’s Transformation”) a ‘much-needed’ spend of USD 360 billion to close the ‘gap’ between 2011 and 2040. Realising this spend would in turn require extensive public private partnerships (AfDB 2011). The PIDA Priority Action Plan (PAP) of 51 ‘infrastructure back-bone’ projects alone require USD 68 billion by 2020, over USD 40 billion (or 60%) for energy and over

USD 25 billion (37%) for transport (AfDB 2011). Meanwhile, the super new Asian Infrastructure Investment Bank launched as an initiative from China with 37 country members to date, had its first Board meeting in 2016 and has been dubbed the new ‘World Bank’ for Asia.

Ouma noted that since the financial crash of 2008, financiers have shown a “new love affair with real things” (2014, 162). In this case, the development banks’ love affair with infrastructure is shared by the government of the Republic of South Africa, which houses Special Infrastructure Projects (SIPs) in the Office of the President. President Jacob Zuma even proposed a ‘fast-track’ for the environmental assessments of SIPs, which are now managed from the Executive arm of Government in the Presidential Infrastructure Coordinating Commission, following the passing of the controversial Infrastructure Development Act into law in 2014 (Government of the Republic of South Africa 2014). There were 18 SIPs identified in the 2012 Infrastructure Plan and the BOP expansion is the second most important by value, only topped by a massive coal railway and port development at Richard’s Bay. It is South Africa’s biggest single location investment project worth upwards of an initial estimate of USD25 billion. Plans to expand Durban’s port capacity from around 2-3 million to 20 million twenty-foot equivalent units (TEUs, a unit of cargo capacity used in shipping) annually, include: a port deepening, to accommodate the new super post-Panamax ships of 15,000 containers; a new artificial ‘dug-out’ port on the old airport site, which will also be used by the petrochemical industry and three back of port refineries; a new offshore oil buoy; an expanded pipeline to Johannesburg (largely completed and doubled in capacity); and extensive back of port logistics and freight facilities requiring the forced removal of thousands of families from the historically disadvantaged communities of Clairwood, Merebank, Wentworth, Isipingo and Umbilo.

Notably then, in the infrastructure gap conception promoted by the international financial institutions and the political elite of South Africa (and elsewhere), the infrastructure in question is generally large, project- rather than programme-based, and directly related to mining and industrial capital, rather than to the infrastructure associated with utilities and peoples’ residential spaces. Thus, the development in this is also not directly concerned with meeting immediate needs (e.g. for clean water, household energy or sanitation), so much as with supplying the assumed and abstracted human benefits of minerals extraction and industry, found in employment creation and ‘trickle down’ wealth effects from economic growth. We now explore this value of infrastructure in development through its materiality, its affects, and the feedback loops of power.

The durable materiality of infrastructure

Materiality is a definitional feature of infrastructures. As Larkin writes “Infrastructures are matter that enable the movement of other matter” (2013, 329): pipes and irrigation channels that carry water; hospitals, equipment and a trained medical workforce through which healthcare is delivered; networks of cables and servers that enable financial flows; ports that facilitate commercial shipping; and so on. In this respect, the material forms of infrastructures embody very particular use values: they enable movement and circulation. Or, at least, they

hold the *promise* of such a use value and all the attendant values that might be generated through such a usage. Not all infrastructures function as intended all of the time; when the material presence of infrastructure falls into disuse or disrepair it may signal to observers the simultaneous promise of value and the failure of this promise (Khan 2006). This paradoxical condition is especially apparent in development, where building new infrastructure is widely assumed, often a priori, to bring value to developing nations despite the dubious longevity and widely unequal distribution of its costs and benefits in many cases (Bracking 2016; Desai 2015). Just as Loftus and March (2015) noted however, it is the imprint on the ground that is perhaps most significant in this type of large project, which seems to thrive in conditions of financialisation (Bracking 2016). Empty stadiums and empty ports may not materialise development value for most of the population, but in feeding investors' pockets from public taxes, they materialise financial value. Thus, the "very real ways in which a material imprint from financialisation has been left in the landscape is important" (Loftus and March 2015, 175).

Indeed, infrastructural builds with protected derivative income streams are both a dream come true to financiers, and a means of growing finance. Torrance's (2009) work on a new Thames Water desalination plant, for example, showed the reordering of values such that in building the new plant, providing finance to investors was prioritised over providing water to customers. Apparently, this plant may not produce water and may only be used in a drought, but holds inflation-protected returns for institutional investors. Rather than water supply, a "more profound motivation seems to be the need for new infrastructural forms within which to ensure speculative gains" (Loftus and March 2015, 175 summarising Torrance 2009). Hildyard (2016) would support the view that infrastructure, and in particular public private partnership models, have an over-riding aim to create a contractual derivative income stream for investors. In the BOP case certainly, the expected derivative income streams from the build itself in procurement contracts, as well as those expected by the lenders to the state-owned-enterprise (SOE) Transnet became early points of contention, just as much, if not more so, than details of the bricks and mortar effects on the landscape and people.

In this debate on derivative benefits, economic calculations invariably employ calculative multipliers abstracted from models of growth effects seen elsewhere or generically. This was so in the economic impact assessment of the BOP, as we see below. Indeed part of the allure of infrastructure as a tool for development lies in the assumption of scalability – that is, its ability to be transplanted, expanded or replicated without transformation of the elements (or relationships between elements), involved (Tsing 2012). Because the material forms of many infrastructures are apparently scalable, the relationships of value that these forms have engendered in some places are also assumed to be scalable, as they are replicated elsewhere. Larkin captures this sentiment, writing:

'Many infrastructural projects are copies, funded and constructed so that cities or nations can take part in a contemporaneous modernity by repeating infrastructural projects from elsewhere to participate in a common visual and conceptual paradigm of what it means to be modern.' (Larkin 2013, 333; see also Mrázek 2002)

Achieving this type of scalability, of course, involves denying, or ‘framing out’ in our more specialised conceptual taxonomy, the differences and heterogeneity between places – the *nonscalable* elements and relationships (Tsing 2012) – that prevent identical infrastructural projects from achieving identical development value across different times and places. The Durban BOP expansion was certainly officially described, evaluated, and marketed as a scalable development, replete with mentions of global, international and shipping ‘best practice’ and many references to large-scale, efficiencies of size, modernist drawings of neat docks, and, of particular political importance, over 27,000 new jobs.

Alongside the promise (and potential failure) of scalable developmental and economic values, the materiality of infrastructure can embody certain relations between governments and populations. Deville and colleagues (2014), for example, lay out the ways in which national governments’ conceptualisations of risk and preparedness are enacted in the durable structures of emergency shelters. They consider how the “particularly durable, supposedly permanent aspect of concrete” used to construct shelters acts as a potent and enduring material symbol and embodiment of the relationship between states and populations, a relationship they call ‘concrete governmentality’ (Deville et al. 2014, 186). As seen in Chapter 2, the term governmentality indicates a political rationality shaping the ‘conditions of possibility’ (Collier 2009; Foucault 2003) for change at any particular moment. Here, adding concrete is both a play on the ubiquitous construction material and its pervasive role in changing landscapes and the built environment, as well as being a metaphor for and an indication of the way built infrastructures solidify certain relationships between governments and populations (see also Harvey 2010). An important subset of this concretisation of relations is that which reifies the uneven relationships between governments and different populations. This is the case for example, when water infrastructures reliably pipe water to some users and not to others (Peters and Woodhouse this volume; Anand 2011, 2012; Von Schnitzler 2008); or when healthcare infrastructures act to systematically deny certain populations adequate healthcare (Machingura this volume). Certainly in the peripheral townships and informal settlements of eThekweni (the metropolitan area of which Durban is the anglophone city), a concrete road, drain, sewer pipe or tap are widely perceived as the indicators of entry into full citizenship within the metropole.

Instead of this concretely symbolic inclusion however, the operational plans for the Durban port expansion will require the removal of a large number (currently contested but likely in the tens of thousands), of settled families in Clairwood, Isipingo, Merebank and some in Umbilo and Umlazi, traditionally black, ‘coloured’ and Indian neighbourhoods. These communities came to rest here following exit from colonialist indentured labour regimes and prior apartheid forced removals. Thus, the impact of plans for the BOP expansion reflect the path dependence of prior histories of racial and economic inequality as well as the infrastructures already in place. The expansion plans for the freight corridor, new logistics centres, new dug-out port and increases in road traffic to impact most on communities already living with dirty industry and an ad hoc experience of traffic expansion and informal industrial sprawl. Under apartheid, dirty industry, landfill dumps, toxic polluters and the like were placed proximately to disadvantaged communities of colour. Rather than addressing these material and spatial inequalities, the BOP expansion further concretises already unequal relations; building on, taking advantage of and expanding this discrimination. The rerouting of the oil pipeline from the Durban oil refineries to Johannesburg, already completed, attests

to the durability of racialised environmental injustice, as its original plans were changed to incorporate more travel through black, as opposed to white, areas.

However the rewriting of old relationships is not the only issue in evidence here. A re-recruiting of an assemblage of constituencies, loose alliances, interest groups and identifiers is also at play, communicated through the literature and documentation of the BOP expansion plans and policy engagements. Therein are notable silences of relationships, evasions and denials that relationships exist at all, and material abjections of prior relationships, in the sense described by Ferguson (2006) of a throwing down or throwing out of persons. These erasures are performed through projected visions of how the future will look if the BOP expansion is completed. In other words, if the expansion goes ahead, the communities of Clairwood, Merebank and Isipingo will be largely dissolved. In anticipation of this, or in a performativity which suits the outcome, these communities are largely absent from the planning documents. For example, the impact assessments drawn up by consultants, read like promotional literature in support of Transnet and its project. In fact, the key impact assessment already ‘zones’ out the people and the names of the communities affected in the title: “*A Local Area Plan and Land Use Management Scheme for the Back of Port Interface Zone*” (Sutherland and Scott 2009). Rather than specific communities whose material presence will be erased and residents forcibly displaced, these residents have become here merely an ‘interface zone’ for the material expansion of the port.

This material embodiment of government relations with a population is closely tied to the second way in which we suggest infrastructures shape values and valuation practices: the affective responses they elicit.

Affect and infrastructure

The materiality of infrastructure has often been framed as largely invisible, only becoming visible when it breaks down (e.g. Star 1999; Collier 2011). This can be illustrated in the networks of cables and warehouses of servers that enable finance. However, the materiality of some infrastructures – including most large-scale development projects like roads, dams, ports and so on – is not only highly visible, but the material visibility of these projects is an essential aspect of what Larkin (2013) calls their ‘political effects’. This is the case where the material visibility of infrastructures is played as spectacle, deployed to elicit powerful affects and emotional attachments.

Harvey and Knox (2012) suggest that enchantment, in the sense meant by Bennet (2010), explains how large-scale, highly visible infrastructures can maintain a ‘generic social promise’, even when such a promise can be seen to have failed in certain aspects. Larkin similarly notes the ‘fetish-like’ aspects of some infrastructures that elicit ‘forms of desire and fantasy’, wholly separate from the technical functioning (or malfunctioning) of the said infrastructure (2013, 329). Many of these affectual attachments to large-scale infrastructures are intended or ‘inscribed’ by those designing or commissioning them (Akrich 1992; Marres 2013). Todorov (1994) has shown, for example, how Soviet factories technically

underperformed, yet still achieved the symbolic meanings intended by communist governments (see also Mrázek 2002). In the field of development, new infrastructures are routinely inscribed with ideas of progress and modernity. Linking back to the use-value of infrastructures as material forms that enable the movement or circulation of things, Larkin summarises how this promise of use-value engenders a promise of other, less material values:

‘...by promoting circulation, infrastructures [are imagined to] bring about change, and through change they enact progress, and through progress we gain freedom. Perhaps this process explains why as objects they provoke such deep affectual commitments, particularly, but not only, in developing societies.’” (Larkin 2013, 332)

Large and highly visible infrastructural projects often capture the imagination of publics who see them as valuable even without a clear concept of the development value (or lack thereof) in these projects (see De Boeck 2011 for a striking example). In this sense, the lack of a clear economic projection of value is not necessary and does not matter. This is because infrastructures are not simply attached to economic values – though these are often assumed – but are central to political imaginaries of progress and modernity (Harvey and Knox 2012; Larkin 2013). As Desai (2015) and Dyer (2014) summarise, the economics of investing ZAR 250 billion in Durban, a container port where costs are already the highest in the world, do not make standard economic sense, but:

‘Once more, like King Shaka airport, Moses Mabhida Stadium, and the International Convention Centre, ratepayers will have to make up the shortfall for massively underutilized infrastructure whose chief benefit is to those who get the contracts to build them and the political class who serve as the “business partners”.’ (Desai 2015, 25)

Desai terms this ‘Faustian development’ (ibid 2015, 27). But, despite the lack of clear development value for most of the population, these infrastructures elicit powerful affects through their situation in the ruling discourse of patriotic, or populist nationalism, such that to oppose these iconic projects is to “go against the national interest” (ibid 2015, 32).

The example of the FIFA world cup 2010 infrastructural funds is an infrastructure built for affect in the service of nation-hood and identity, as opposed to sound economic or development value. These funds built new stadiums in South Africa in a model that transferred risk and cost to future taxpayers, while short-run income streams were guaranteed for ‘tenderpreneurs’ and offshore financiers. As Desai writes of the Moses Mabhida Stadium built in Durban for the 2010 FIFA World Cup:

‘Global finance capital.....thrives in a world of large-scale investment in mega-projects, mega-events, and the short-term investment, long-term debt, and creative financing

associated with them. The model also imposes a world view in which the West becomes the unit of global measurement.’ (Desai 2016, 90)

The Moses Mabhida stadium, where local football teams regularly draw crowds of just a few thousand, seats 70,000 people. Meanwhile its standard operating costs, excluding renovations and repair, are ZAR 88.5 million a year, with only ZAR 9 million retrieved from ‘non-bowl’ activities such as shops, restaurants and a gym. Thus, the stadium must make over ZAR 1.5 million per week to break even (the remaining ZAR 79.5 million), and yet “[a]s anyone can attest who regularly passes by the great empty hulk of a building...this level of use is nowhere near being attained” (Desai 2016). Thus the whole infrastructure exercise, underpinned by cost-benefit calculations privileging short-term derivative income flows to top tranche investors and the ‘tenderpreneurs’ over long-run costs to the taxpayer, was made popular in Durban through a language of ‘mega-projects’, the ‘Madiba Magic’ of global inclusion and modernity (Desai 2015, 2016).

In the BOP expansion case, and in others like it, the appeal to modernity and affect is entangled with discourses of economic and development value, with these values acting through a “heavy infrastructure of conventional forms...formal indicators, accounts and procedures, standards, benchmarks, good practices, etc” (Thevenot 2015, 195). It is a language of formalization (ibid), which was used by many parties to the debate and contestation over the port development in ‘critical moments’ where an appeal to justification was required (Boltanski and Thevenot 1999, 359). These standpoints are situated in a messy configuration, which is best described as a *dispositif* – an emerging or contested arrangement of correlations between things, people, non-human species and discursive and calculative devices in place (see Braun 2014, 50-51; citing Foucault 1980, 194). This arrangement is different to the more traditional understanding of struggles around infrastructure, where a configuration of ‘good environmentalists-versus-big capital’ is depicted, with two standpoints which are mutually exclusive and necessarily competing (more below).

In reflecting on the performance of nationhood and patriotism through South Africa’s mega-project infrastructures, Desai quotes Castells’ point that “the flows of power generate the power of flows, whose material reality imposes itself as a natural phenomenon that cannot be controlled or predicted.... people live in places, power rules through flows” (Desai 2016; citing Castells 1989, 349). This brings us to the third way in which infrastructures are implicated in the articulation and performativity of values: namely the feedback loops of power.

Infrastructure and the feedback loops of power

Çalışkan and Callon write that market inequalities result from “the unequal power of calculating agencies that loop back to reinforce themselves. Due to these asymmetries, the most powerful agencies are able to impose their valuations on others and consequently to impact strongly on the distribution of value” (2010, 13). This general assessment of market values is useful for thinking about power, value and infrastructures. As in markets, asymmetries in power allow some infrastructural assemblages to self-reinforce their own value at the expense of other infrastructural forms. In the material scalability of

infrastructures and the grand political theatre of mega-projects affectually framed as development, other, smaller, infrastructures are inevitably framed out: infrastructures that are local, pre- or a-modern, infrastructures of the powerless. In Durban's Clairwood neighbourhood, various informal social, economic and cultural infrastructures stand to be swept away by the BOP expansion and the value of this existing infrastructure denied. Indeed, the local government structure and the planning documents it produces do not see the extent of the informal economy as they are spatially and culturally removed from the poor (Tshabalala et al. 2017).

Of course the fact that inequalities in markets produce asymmetries of *power between and within* market agencies and institutions, is related to the '*outside*' of market structures and what happens there in institutions of government and society. In the BOP case, market inequalities are themselves authored by the mode of regulation adopted by the political elite and President Zuma and his 'state capture' cronies in particular. As has now been described eloquently by the *State Capture Research Project*, during 2010 to 2016, President Zuma and a senior group of connected persons within government and in the private sector, particularly the Gupta family, successfully promoted a political project under the rubric of radical economic transformation, which repurposed government and redirected the procurement spending of the SOEs to themselves (State Capture Research Project, 2017). The spending begun and anticipated for the BOP, like other SIPs, was placed under the Presidential Infrastructure Committee and was to be largely spent through Transnet. This committee and other inter-ministerial committees secured 'parallel government and decision-making structures' (2017, 20), which according to the authors of the *State Capture Research Project*, was important in centralising power under President Zuma and which (among other developments) contributed to making state capture possible (2017, 19-20). Committees such as these lack transparency and do not have to report to Parliament, as individual cabinet members must, and thus constitute a thinning of parliamentary oversight (Democratic Alliance 2014). While the details of the politics are not needed here, the overall pattern is important, since the structures of power under a situation of state capture by a power elite are synergistic to the promotion of big infrastructure projects. Such projects are ideal conduits for the flows of spoils.

Apart from the opportunities afforded for personal enrichment, there are several other reasons for the popularity of big infrastructure spending from the perspective of the political economy of elites. Firstly, in the absence of an industrial policy that is working to produce jobs, building something that creates jobs at opportune moments in the fiscal and electoral cycle has obvious benefits for those seeking re-election. Secondly, in a country with racialised inequality, construction, where start-up costs are relatively low, is one of the few economic sectors where historically disadvantaged persons can gain entry. Consequently, jobs can be distributed among a constituency within an 'economic justice' discourse, and to key ruling party supporters in exchange for political finance. Thirdly, public procurement and tendering processes can be further designed to assist new market entries, political support for the ruling party and to raise political finance. Fourthly, justifying public expenditures on infrastructure can be done principally by referencing the beneficiaries of procurement, building and employment created in these processes, while the actual long-run costs in loan repayment and sustainable jobs which remain after the construction (often much fewer), are downplayed. Thus in terms of financialisation processes overall, there is also a synergistic relationship

between building infrastructure; concentrating power within party-states and the greater extractivism made possible for financiers and construction companies from the national economy.

Unsurprisingly, the consultants (Graham Muller Associates Consortium and UrbanEcon), who were commissioned by eThekzwini Municipality to conduct impact assessments, assumed the BOP expansion was in the national interest *a priori*, such that adverse effects on persons and nature were assumed to be unavoidable and necessary, if they were mentioned at all. UrbanEcon used textbook growth multipliers, normal when scalability is assumed, to argue for surprisingly precise job creation figures of “318 279 temporary jobs created through the port construction process... 63 656 jobs during a 30-year construction phase....job creation of an additional 27 533 jobs at full operation” (Feigenbaum 2011). Meanwhile, to measure not jobs, but the size of formal business’ contribution to GDP, Graham Muller Associates conducted a ‘status quo assessment’ of the back of port area, thus comparing a future scenario with a status quo that will no longer exist, and leaving unmeasured the future of the proximate people affected (2009b).

With the power of international development banks, the South African government and its hired consultants all feeding back into these narratives of immense value creation through the BOP expansion, there has been little room in official accounts for opposing values to be voiced. This is despite the fact that the economics used to support the BOP expansion failed to convincingly make the case for its economic value on a number of counts (Bracking 2013a; Bracking 2013b). Firstly, a comparative sector analysis was not carried out. Top-down planning suggests that all is possible (win-win), but the interests of different economic sectors can contradict each other, with in this case, possible conflicts with leisure, tourism, cultural industries, sports and lifestyle industries, retail and small commercial, and light industrial ventures. Also missing was a comparative counterfactual analysis that would look at the opportunity costs of investing in alternative job-creating projects – as Desai points out, even if the jobs promised in the consultant reports were created they would cost ZAR 1.9 million each (2015, 26). Most critically, perhaps, other increases in regional capacity were not considered. These include: the Bolloré Africa and CFM (ports and railway para-statal) building Mozambique's first oil port in the city of Pemba; Grindrod, Africa’s largest shipping company, and Mozambique’s Maputo Port Development investing USD 1.7 billion over the next five years to upgrade ports; the tripling of capacity at the Maputo and Matola ports from 15 to 50 million tons by 2020; port expansion in Angola at Lobito (USD 1.2 billion investment by government), Cabinda, and Luanda (over USD 350 million); a multimillion dollar green-field port at Lamu in Kenya; and the planned USD 11 billion Bagomoyo port in Tanzania which will be bigger than the Dar es Salaam and Mombasa ports, both of which are also expanding.

In addition, the externalities of the costs of the dig-out port were not costed into the BOP expansion’s official accounts of value, including costs to people (social and economic impact, heritage capital) and the environment. These were significant, and only inadequately anticipated. For example, a minute of the eThekzwini Housing Committee in May 2012 noted that 12 settlements, involving 30,000 individual units excluding the ‘backyard shacks, would need to be relocated into the housing development at Cornubia. At that time this was in its infancy and would include only 12000 units when complete, such that there was “an

oversubscription of almost 18 000 units” [22 May 2012, Head of Housing to ECOD Housing Committee]. In addition to this social cost, Graham Muller Associates also noted environmental effects:

A significant area will be displaced, compensation may require remaining areas of coastal grassland such as the racecourse in addition to significant areas outside the area. The loss of habitat associated with port development may not be replaceable in the location (2009a).

Initially, ‘conserving’ the Clairwood racecourse was proffered as an ‘offset’ for this cost, but by August 2015, the racecourse had also controversially been transferred to developers for a logistics park, leaving little prospect for offsetting the costs of the BOP expansion borne by the people and environment in South Durban (SDCEA 2014; Hallowes 2014).

In an alternative assessment of income, assets and actual employment already in the area, Diga and Bracking found nearly 500 jobs (of which 491 were mostly informal) existing in just 1,000 representative households surveyed (Diga and Bracking 2015, 16). Were the BOP expansion to go forward, the inevitable job-losses were notably not included as a deduction from the projected jobs to be ‘created’ and widely advertised by the contracted consultants. Moreover, it was discovered that over 11.5% of the residents sampled were in informal (or “illegal”) settlements, which were not counted for the resettlement considerations (Diga and Bracking 2015, 9). The alternative assessment further found that 23.4% of households were living on less than ZAR 1,000 per month; 57.3% earned less than ZAR 3,000 (Diga and Bracking 2015, 8); and only 43.4% were receiving social assistance, 87.8% of which was from the Government (Diga and Bracking 2015, 18, 19). At the time of the survey, the claimant income level for a Child Support Grant, for two people, was ZAR 2,600 suggesting that a significant portion of people who should have been able to collect assistance were not able to. In the survey, 18.1 % were successfully claiming Child Support, and 17.2 % an Old Age Pension (2015, 20). Thus the people and their environment have been historically neglected, and are not currently ‘seen’ by a state elite, and their contracted consultants. The poverty of the community was instead used against them to suggest that what would be lost was not worth saving, despite huge cultural, social and historical infrastructure and capital present in the neighbourhood (Bracking et al. 2015).

So, while the case for the economic value of the BOP expansion for the proximate persons was never established, in fact, it can be argued that this calculation was not even attempted. To begin with, the aggregate case was also weak (commensurate with more general findings on the economic projections associated with large projects). More importantly perhaps, establishing the value of the BOP expansion for those with little power was considered unnecessary from the point of view of the powerful actors supporting its construction. The valuation processes used to justify infrastructure builds do not typically demonstrate a returned profit on a national scale, although they invariably promise jobs and growth. Instead, and reinforcing their existing power, complex global financialisation assemblages have altered financial parameters in costing the benefits of infrastructure in favour of (further) privatisation of profits offshore and socialisation of costs onshore (Bracking 2016). This also illustrates how conventional development economics has difficulty grasping the value of

large construction projects in social terms, mostly because it occludes the issue of scale. Assuming a national frame of ‘much-needed’ FDI in the present, it fails to account for the local and future costs of infrastructure projects.

***Dispositifs* and unlikely alliances**

As of August 2016, the BOP project had been postponed due in part to the global economic slowdown in shipping, but also as a result of problems in financing and resistance by the communities affected (groundWork and SDCEA 2016; Bond 2016). While traditional models of a binary struggle between capital and labour, or polluting industries and environmentalists, may give rise to debate about whether the latter ‘won’ the struggle, or capital (merely) changed its mind, the case study here could equally reflect what Braun has recently termed a biopolitics of ‘eco-cybernetics’ (2014, 50), where the administration of life is increasingly integrated and iterative to the global economy and city assemblage. In Braun’s understanding, environments and people become ‘infrastructures’ or the background canvas for a built project, while increasingly large-scale capital assets, such as the so-called ‘ecosystems’ of colocation warehouses for financial exchanges, are described and conceived in ecological terms. In this reading, the underlying design flaw of the BOP project could have been simply that its overly modernist and imposed style jarred with new framings of city landscapes as resilient and flexible spaces where tourism and industry can be co-located. The heterogeneity and shifting terms of the BOP expansion can then be read as reactive to multiple points of opposition, including from other sections of business. The complexity of variously positioned groups surrounding the BOP expansion may then be usefully seen as a locally situated ‘*dispositif*’ in the Foucauldian tradition, that is, “a thoroughly heterogeneous set consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral, and philanthropic propositions” (Foucault 1980, 194; cited in Braun 2014, 51). Thus, while the scope of the BOP expansion *dispositif* is tilted in favour of big capital by discourses of modernity and structures of power, its modernist design, as demonstrated in the BOP plans, still attracts oppositions as it fails to appreciate the fissures, contradictions and contested valuation practices of groups, agencies and interests in place.

Rather than aligning with the modernist affect, understandings of the value (or lack thereof) in the BOP expansion by those interviewed in Clairwood were multiple and at times at odds. For example, poor residents involved in the trucking industry as drivers, workers, owners of storage facilities, or providers of breakdown or salvage services, tended to support the BOP expansion plans, despite the vociferous and sometimes near-violent opposition of their erstwhile neighbours (Bracking et al. 2015). For other residents already seeking exit from a polluted Clairwood, where trucks blast past regularly killing bystanders in what is supposed to be a residential neighbourhood, the speculative land market that flourished from 2013-2015 in expectation of the BOP expansion was sufficient to entice them to sell up and relocate of their own accord. Indeed, evidence collected in the Clairwood survey (Diga and Bracking 2015) showed widely fluctuating land and property values in 2014, fed by speculation and uncertainty over present and future values. One interviewee ironically valued his cardboard home at ZAR 3 million, lying as it did in the path of the area to be rebuilt.

Another said he wouldn't leave his shack for less than several million rand. Similarly, the SDCEA-led 'we will not move' campaign was somewhat frustrated by the clear views of the extremely poor informal sector and shack dwellers, that if the BOP expansion entitled them to assisted removal and rehousing to 'anywhere with a tap', then it would be welcomed (Respondent, Clairwood survey). Others bemoaned that they had already been made violently homeless by landowners clearing informal units to make way for truck parking and land sales. Consequently, an easy coherent coalition either for or against the BOP expansion was not to be found.

To illustrate the multiplicity of values at play, consider two aspects of the Clairwood survey, which were discussed and clarified at a community engagement event at the Sikh Hall in late 2014. Firstly a very strong resonance of community is found in many of the 1000 households surveyed, with persons describing a deep sense of belonging in Clairwood:

"Clairwood is who we are [...] Clairwood is more than just an area, it is our life," (Male, Sastri Rd)

"Everyone here is in the same struggle here and we share our struggles and that is who we are. I like how there's a mix of all races here: Coloured, Indian, White, Zulu, Xhosa, Zimbabwean, everything," (Female, in informal settlement).

"Here we would receive help from neighbours even if we do not have food we would never sleep hungry" (Female, Sir Kurma Rd).

"I was born here, my mother and father died here. I will die here too," (Female 20130017, Horsham).

(Bracking et al. 2015, 9-10)

Secondly, however, over 46% of those surveyed said they would be willing to move if an appropriate level of compensation were offered by Government, ranging from ZAR 20,000 to ZAR 5 million (Diga and Bracking 2015, 5-6).

Not all factions of 'big capital' supported the expansion either. Notably those who required an operating environment that is environmentally 'clean', such as hoteliers and leisure industry niche operators – in this case Durban Underwater Club, the Yacht Club, uShaka Marineworld and so forth – also have a conflicted relationship to the BOP expansion, given the associated growth of polluting risk and fossil-fuel industrial assets. While necessarily muted by the clear support of the ruling party for the BOP project, these dissenting views were nonetheless in evidence at important 'critical moments' of value justification, such as: in September 2012 when the Finance Minister spoke at the Sikh Hall to an initially compliant audience who could be nonetheless roused into opposition by the polemics of Professor Ashwin Desai; at the Durban Chamber of Commerce discussion Chaired by Andrew Layman in July 2013; during the SDCEA discussion at Amanzimtoti Conservancy with Transnet's Marc Descoin in 2013; at the eThekweni EDGE Forum-sponsored discussion event in the Presidential Suite at Moses Mabhida in February 2015, where a maritime expert from the World Bank spoke against the plans and in favour of an incrementalist approach.

Conclusion

In this chapter, we have explored three major avenues through which infrastructure dispositifs come to enact value (in multiple forms): materiality, affect and power. Although the values enacted in these ways are sometimes scripted and intentional, they may also have unplanned, emergent effects. Interesting changes to policy and response in the cities of the Global South are occurring, partly because of the infiltration, shared terrain and global scale of development languages and negotiations of value. In eThekweni global knowledge and practice are widespread, while work from eThekweni contributes to the formation of global 'best practice', thus problematizing any hierarchical organization of scale in the knowledge economy and its effectual devices of value justification. In consequence, understanding the values and valuation practices of large-scale infrastructure projects requires an accurate empirical exploration of the *dispositif* of the everyday life of projects, programmes and activities. Thus, while there is a tendency among parts of the traditional 'Left' for moments of struggle to be read in an epiphenomenal way from class location (such as in the proposition that all residents would automatically oppose the build), this is not the case. Nor is it that persons have false consciousness or are otherwise deluded. This speaks only to the arrogance of the observer who knows that their standpoint is invariably correct, the form of critique criticized by feminist theory (e.g. Haraway 1997). Instead, development value must be researched honestly, acknowledging that it is inevitably conflicted by economic injustice, hopes and aspiration as experienced through complex processes of affect, and different views on the nature of progress and change.

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