

Gender and Infrastructure in the World Bank

Abstract

This paper conducts a critical analysis of the World Bank's current infrastructure strategy from a feminist perspective, arguing that failures to define gender and set meaningful targets and indicators have meant that gender has not been integrated into the implementation of infrastructure projects. We set out three limitations to the World Bank's approach to gender and infrastructure from a feminist perspective - lack of awareness of gender in the four sectors that comprise infrastructure; the World Bank's narrow approach to gender equality and women's empowerment; and the failure of the World Bank to mainstream gender in its current infrastructure strategy.

Key Words: Gender, World Bank, Infrastructure, WDR 2012

1. Introduction

Infrastructure has recently returned to the centre of international development priorities. While the past twenty years have seen a preoccupation with aspects of human development such as health and education, perhaps best exemplified by the United Nations (UN) Millennium Development Goals (MDGs) agenda, there is much to suggest that such human development issues are soon to take second place to larger more integrated infrastructure projects in the post-2015 world, involving multiple countries and multiple actors.¹ Infrastructure spending is an issue in which borrower countries have long been asking multilateral donors such as the World Bank to invest. For the World Bank, infrastructure is considered to be a key vehicle for social and economic transformation – an aspect of wider economic growth - and thus central to development (World Bank, 2012a) and in 2010 made it a key priority for the institution to focus on. Infrastructure is a core component of Chinese development assistance, particularly in sub-Saharan Africa (Grimm, 2013). The G8 and G20, the World Bank, and regional development banks, have all identified infrastructure as a core site of development assistance in the coming years (African Development Bank, 2013; Asian Development Bank, 2013). Lending towards key infrastructure projects such as energy from OECD countries has quadrupled in the last ten

¹ Infrastructure here refers to large-scale projects on water and sanitation, transport, information communication technology (ICT), and energy.

years, whereas spending on more ‘human’ development showed a decline (Harman and Williams 2013). At the same time, concerns about gender equality and women’s empowerment continue to be central to the rhetoric and practice of international development institutions such as the World Bank. This can be seen, for example, in the recent World Development Report (WDR) 2012 on *Gender Equality and Development*, in which increasing women’s productivity and women’s agency are constructed as fundamental for international development and poverty eradication, as well as a focus on the intrinsic value of gender equality. This paper is concerned with the intersection between gender and infrastructure in contemporary international development. To date, there has been very little interaction between infrastructure and gender policies and programmes at the World Bank. However, in this paper we show how this is changing, setting out the ways in which infrastructure is considered to be a key component of the gender equality and women’s empowerment agenda, and vice versa. We argue that this current juncture is particularly interesting for contemporary international development, as it demonstrates a move beyond a focus on human development. At the same time, we are concerned with the ways in which gender interacts with the emerging post-human development framework, and to what extent gender ‘fits’ within this agenda.

Focussing on the World Bank, we analyse the role of gender in the current infrastructure agenda and the role of infrastructure in the institution’s gender strategies. The paper explores how and why gender is addressed in infrastructure programmes in developing countries, how gender is framed in infrastructure policy, and how policy translates into implementation. In order to do this, we use feminist analysis to interrogate the intersection between gender and infrastructure. We draw on a range of literature on gender and development in order to make our analysis, grounded in a critique of an instrumentalist framing of gender equality in favour of a concern with the political economy of gendered dynamics of power. This relies on an approach to infrastructure which acknowledges the power relations embodied in infrastructure planning and policy, rather than consider these to be ‘gender-neutral’ processes. The overarching argument of the paper is that there are three main limitations to the World Bank’s infrastructure and gender agenda, from the point of view of feminist analysis. First, there is limited awareness of gender in the four sectors that comprise infrastructure, and very little research that focuses on the gender dimensions of infrastructure as a whole sector. Second, there are substantive limitations of the World Bank approach to gender equality and women’s empowerment. Third, we argue that in spite of rhetoric, gender is not mainstreamed in any meaningful way into the World Bank’s current infrastructure strategy.

The paper begins with a critical review of the current literature on gender and infrastructure programmes in developing countries, identifying the key issues and gaps that emerge from this research. In particular, it points out that while there is a broad range of literature on gender and the four individual sectors - transport, energy, water and information communication technology (ICTs) – there is currently little research on infrastructure as a whole. In this paper, we try to bridge this gap between different sectors in order to develop a holistic gender analysis of infrastructure development. The paper then goes on to give an overview of how infrastructure is framed within the World Bank’s current gender equality and women’s empowerment agenda. The focus is particularly on the role of infrastructure in the WDR 2012, in which we argue that the contours of the debate have shifted substantively. Next, we explore how gender features in World Bank policy documents, strategies and projects on infrastructure. While gender issues are notionally included in such documents, we argue that gender is lost in the implementation phase. Moreover, we show that in spite of the revised framing of gender and infrastructure in the WDR 2012, such changes are not reflected in the infrastructure strategy. In the final section of the paper we develop a critical analysis of the relationship between gender and infrastructure in the World Bank. Here we suggest that though welcome and in its infancy, the Bank’s attempts to integrate gender into infrastructure projects presents two missed opportunities; to go beyond instrumentalist approaches to gender and to understand gender equality beyond the confines of human development issues.

2. Gender and infrastructure

Reviewing the available literature reveals the first limitation of the current intersection between gender and infrastructure – lack of in-depth feminist analysis on infrastructure as a whole. There is very little research covering infrastructure as a whole, as opposed to on the four sectors individually– energy, transport, water and ICTs. This lacuna in the literature and in infrastructure planning means that many areas of potential synergy are missed. For example, linking energy and transport planning from a gender perspective could lead to solutions such as mechanised transport to minimise the negative impact on women’s health issues and on meeting household energy needs (Clancy and Skutsch, 2003). In addition, in the transport sector sometimes non-transport interventions might in fact improve women’s mobility and bring benefits to poor women, such as ‘improved water supplies, community woodlots, more efficient wood-burning stoves and crop-grinding mills’ (Porter, 2008: 285). Within the ICT sector there is much discussion of how new technologies may offer opportunities for ‘mobility

substitution.’ However, without a strong gender analysis across sectors the ‘structural barriers of time and income poverty which constrain women’s access to transport’ are likely to be replicated in their access to ICTs (Porter, 2008: 286). This integrated analysis is a vital step in constructing a gender approach to infrastructure, and will be elaborated in more detail throughout the paper. Based on a review of the available literature on gender in all four sectors, we outline three key themes that emerge from this research in order to guide the subsequent analysis: lack of productive dialogue between gender experts and planners and engineers; the gendered impacts of infrastructure planning and development; the importance of a feminist approach; and the role of social reproduction in the analysis of gender and infrastructure.

The first issue to highlight is the differential impact of infrastructure planning and development on women and men. In the energy sector, for example, responsibility for household energy provision affects women’s health disproportionately to men’s, reduces time women have for other livelihood activities, and keeps girls out of school (Clancy and Skutsch, 2003: 10). This drudgery tends to be reinforced through the lack of women’s influence in energy and water decision-making, meaning that men’s energy needs (i.e. for irrigation pumps) have tended to trump women’s (i.e. the need for drinking water) (Clancy, 2009). Research on ICTs in developing countries have shown that most women are in the deepest part of the digital divide, ‘further removed from the information age than the men whose poverty they share’ (Olatokun, 2008: 53). When women have not been active participants in the development and use of new technologies, it has been assumed this is because of their own choice and that they have been slow to recognise the importance of such technologies. Little consideration has been given in the planning of ICT policy that this lower interest by women in new technology may come from a sense of pragmatism – ‘that is, out of their need to deal with a multitude of tasks, meet a variety of demands, and play diverse roles with limited time’ (Olatokun, 2008: 53).

In the transport sector, gender differences are manifested in access to and use of transport infrastructure. Women in developing countries tend to face more substantial constraints on mobility and travel due to their often relatively weaker economic position and time poverty induced by heavy work burdens and child care. In sub-Saharan Africa, for example, men tend to be the principal operators and owners of commercial motorised and non-motorised transport whereas women are commonly the principal pedestrian transporters (Porter, 2008). In most developing country contexts men tend to travel more than women. While men predominantly travel for work, women’s travel tends to be more related to reproductive work. Men also do more peak travelling than women when service provision is better, and use more expensive modes of transport, and are less likely to walk than women

(Levy, 2013: 19). Due to the lack of gender awareness in transport planning, transport interventions often have unanticipated negative consequences for women. A focus on mobility as opposed to accessibility, for example, ‘may enhance gender biases in that the benefits tend to accrue to those already mobile, that is, male vehicle owners’ (Porter, 2008: 285).

Second, it is important to highlight the difference between a focus on women and a gendered or feminist approach. The literature on some sectors— for example, water and transport - are more rich in feminist analysis than the others, and offer insights that can be broadly applied to infrastructure as a whole. In the water sector, for example, while there is a large body of research on women, the majority of such work has not taken a feminist approach (O’Reilly et al, 2009). As such, gender issues remain ‘under-theorized and marginal’ in mainstream water literature (Laurie, 2010: 172). In addition, gender dynamics have been largely absent from more critical water debates around neoliberalised nature (Harris, 2009). In contrast, feminist approaches to water are concerned with ‘the power dynamics underlying resource allocation with gender inequality being a critical structuring force in this’ (Ahlers and Zweeten, 2009: 410). Development interventions in water have tended to prioritise the interests of the poorest and most vulnerable women. However, as Dávila-Poblete and Rico (2005: 49) argue, such a focus ‘fails to address the inequalities and power relations between men and women and often essentialises women’s positions as guardians for nature and the environment, thereby giving them sole responsibility for the environmental crisis of everyday life.’

In transport, research focussing only on the differences between women and men’s transport patterns has meant that the gender dimensions of transport planning were ‘restricted to the realm of behavioural differences’ (Law, 1999: 571). However, feminist research on gender and transport reminds us that ‘prevailing gender constructs are intimately related to places and the interaction between places: just as social processes help in shaping gendered mobility patterns and access to transport, mobility and transport are strongly implicated in the shaping of social processes’ (Porter, 2008: 281). This allows for an understanding of transport and transport planning as ‘conflictual and contested, a far cry from the consensual paradigms of mainstream transport planning’ (Levy, 2013: 5). This conceptualisation of transport planning as conflictual and contested is highly useful for the purposes of this paper, and can be broadened to analyse infrastructure as a whole. This allows for an analytical framework which takes into account power relations – particularly gendered power relations - at the household, community and society level.

A final, and related, thematic issue is the role of social reproduction in a gendered analysis of infrastructure in planning and development. In the energy sector, for example, the

gendered division of labour generally allocates to women the responsibility for the provision of household energy, in particular for the kitchen (Clancy and Skutsch, 2003: 10). Due to the location of such tasks in the unpaid, non-market domestic sphere, energy interventions have tended to neglect these issues, in spite of their high potential to reduce women's drudgery. As Clancy and Skutsch eloquently point out, women's survival tasks based on their own metabolic energy inputs are invisible in energy statistics just as biomass, a non-market commodity does not appear in official statistics (Clancy and Skutsch, 2003: 12). In the case of water, as Zwarteveen (1998) noted in an early work, women's unpaid work and non-market activities challenge notions of 'efficiency' and other such assumptions that form the basis of contemporary water management. Indeed, as Roberts (2008: 545) argues, the neoliberalisation of water should not be viewed primarily in terms of relations of production but rather of social reproduction. This requires an analytical framework which acknowledges 'the significance of social connections – those non-market relations inherent in the functioning of real life, but abstracted into non-existence in neoliberal policy' (O'Reilly et al, 2009: 385). Our concern now is the ways in which gender plays out in the World Bank's approach to infrastructure.

3. Framing gender and infrastructure in the World Bank

A second limitation of the current gender and infrastructure agenda is the ways in which gender equality and women's empowerment are framed within the World Bank, as criticised extensively in the feminist literature on development. In summary, this critique centres around what many argue is an 'instrumentalist' approach to gender equality (Bergeron, 2001; Griffin, 2006). For example, the overarching framework of *Gender Equality as Smart Economics* – outlined in the 2007 *Gender Action Plan* – consistently presents gender equality as something which is likely to lead to broader development outcomes, as opposed to being a necessary goal in its own right. This approach entails very clear ideas about the meaning of gender equality and the rationale for promoting this, stating that 'when women are given economic opportunity, the benefits are also large for their families, their communities, and ultimately for national development efforts' (World Bank, 2007). In addition, feminists have criticised the ways in which women's empowerment has tended to be reduced to economic empowerment in development practice – that is, empowering women to participate more effectively in markets (Ferguson 2010). This economic empowerment approach is embedded within a broader neoliberal approach to development which aims to foster 'rational economic woman' (Rankin,

2002) with little concern for broader issues of political and social empowerment (Keating et al, 2010).

More recently, the Bank has arguably begun to move away somewhat from an exclusive focus on a Smart Economics approach. The 2010 document *Applying Gender Action Plan Lessons: A Three-Year Road Map for Gender Mainstreaming*, for example, maintains a focus on women's economic empowerment but also highlights the need to pay attention to vulnerable boys and men, effectively address gender inequality, and provide safety nets in response to crises (World Bank, 2010). In addition, the transition plan expands the focus to maternal mortality and reproductive health, issues missing from the original *Gender Action Plan*, as well as a broader focus on social protection (World Bank, 2010: 21). The WDR 2012 demonstrates some potential for moving away from the smart economics approach. For example, in contrast to the primarily market focus of the *Gender Action Plan* and *Transition Plan*, the household as a site of analysis appears frequently in the report. The analytical framework presents gender inequality as the result of the interaction between markets, institutions and households, with some recognition of gender differences in time use and the ways in which these interact with markets and institutions (World Bank 2012b). At the same time, in a marked change from the instrumentalism of the smart economics framework, gender equality is presented as being important in its own right (Razavi, 2012). However, as several feminist commentators have noted, WDR 2012 is still firmly embedded in a discourse of women's economic empowerment through market activities (Chant, 2012). In addition, appeals to redress gender inequalities are still often presented in instrumentalist and essentialist terms, such as 'women are more likely than men to spend money on their children and to invest their earnings in reproducing the next generation' (World Bank, 2012b: 5).

3.1 Infrastructure in the WDR 2012

In the analytical framework of the WDR 2012, infrastructure is conceptualised within the category of 'formal institutions', thus according it a high profile throughout the report (World Bank, 2012b: 8). In the Foreword, for example, improving infrastructure is cited as a key measure for addressing disparities of earnings and productivity between women and men (World Bank, 2012b: xxii). This framing of infrastructure is echoed throughout the report, where it is embedded within arguments about 'releasing women's time.' Improvements in infrastructure services are cited as one of three types of policies that will contribute to this goal, along with child care/parental leave policies and policies that reduce transaction costs

associated with accessing markets (World Bank, 2012b: 26). Transport and ICTs are frequently discussed in the report. Improvements in transport, for example, ‘reduce the time costs associated with working outside the home, making it easier to manage the multiple burdens of house, care, and market work. ICTs ‘help reduce both the time and mobility constraints that women face in accessing markets and participating in market work’ (World Bank, 2012b: 27). Reducing mobility constraints related to lack of infrastructure development is cited as a key source of greater wealth for women (World Bank, 2012b: 153). This fits with other readings of WDR 2012, for example by Roberts and Soederbergh (2012), who argue that there is little deviation from the ‘smart economics’ paradigm.

However, it would be an over-simplification to suggest that productivity is the only way in which infrastructure is discussed in the Report. An explicit link is drawn in the report between expanded infrastructure and women’s agency, as discussed in more detail below (World Bank, 2012b: 155). The World Bank defines agency as ‘an individual’s (or group’s) ability to make effective choices and to transform those choices into desired outcomes... the process through which women and men use their endowments and take advantage of economic opportunities to achieve desired outcomes’ (World Bank, 2012: 150). There is also a discussion of how freeing up women’s time through improvements in infrastructure services can lead to more leisure time for women. In a departure from previous World Bank approaches, the Report notes how such improvements may produce ‘no impact on market work but noticeable impacts on leisure time, which also increase women’s welfare’ (World Bank, 2012b: 27). Interestingly, in contrast to the Smart Economics approach, women’s disproportionate amount of care duties within households and families are acknowledged. Infrastructure improvements are cited as one of the range of policies with the potential to affect this (World Bank, 2012b: 319). As such, it can be argued that the relationship between gender and infrastructure is substantively developed in the WDR 2012. This moves beyond a purely instrumentalist approach to explore issues such as agency, leisure and social reproduction, as discussed in more detail below. In spite of the limitations of the over-arching smart economics paradigm, the WDR 2012 arguably broadens the World Bank’s approach to gender equality and offers space for potential transformation. We now analyse to what extent this approach is replicated in the current World Bank infrastructure agenda.

4. Gender in the World Bank’s Infrastructure Strategy

The World Bank has a long and varied history on infrastructure projects. Initially established as an institution for the post-World War II reconstruction of Europe, infrastructure has been a core component of the institution's work. However by the late 1990s a number of high profile infrastructure projects such as the Sardar Sarover Dam and the Polonoreste highway project and controversial structural adjustment policies dented the Bank's reputation in the area of infrastructure and international development more broadly. While the Bank has not overtly stated that it has learned lessons from past problems there is a change in rhetoric as to how the institution now approaches infrastructure programmes, putting states as 'clients' first. Governments are now seen to be put at the centre of infrastructure planning processes and have indeed been asking for greater investment in infrastructure from the Bank (Harman and Williams 2013). Infrastructure planning is meant to be more mindful of the social and environmental externalities of such programmes rather than a narrow focus on the potential economic gains such large-scale projects may deliver. A concern for gender in infrastructure programmes is core to this new approach.

While gender issues are clearly relevant in all four sectors of infrastructure, the application of gender mainstreaming has been somewhat sporadic. In energy, for example, gender mainstreaming does not have a strong foothold, despite 'energy at the micro-level being women's business' (Clancy, 2009: 1). In the transport sector, gender issues have tended to be considered 'social' or 'environmental', and as such have not been integrated into transport planning. In general, there remains 'a lacuna in transport planning's understanding of the everyday lives of women and men, girls and boys in urban areas' (Levy, 2013: 15). While there has been growing awareness in development discourse in recent years of the role of women in water, 'most water sector decisions continue to be made based on the false assumption that they are gender neutral, that the population is a homogenous whole, and that benefits reach everyone equally' (Dávila-Poblete and Rico, 2005: 49). The ICT sector is arguably even less sensitised than the others. A review of ICT policy in four African countries, for example, found that no strategy incorporated a systematic gender dimension (Olatokun, 2008: 58). The extent of research on gender varies between sectors. For example, there is currently not a large amount of literature available on gender and ICTs, particularly within a development context. Likewise, literature on gender issues in transport in the global South is still relatively scarce (Venter, Vokolkova and Michalek, 2007). Issues such as the relationship between infrastructure and inheritance would also merit further research (Cooper and Bird, 2012). Moreover, there is a clear case for integrating a systematic gendered analysis of infrastructure into the analysis of macro-poverty linkages (Fontana and van der Meulen Rodgers, 2005).

Gender is to some extent taken into consideration in infrastructure planning, design and evaluation, while gender experts have been included in the programmes of key infrastructure sectors such as energy and transport (see for example World Bank, 2013a). The Gender and Development Unit and the Sustainable Development Network of the World Bank have made gender mainstreaming recommendations for infrastructure projects. This is through input into infrastructure strategies from members of the team and publications in the World Bank Working Paper series and briefs. However, we argue that the ways in which gender is integrated into World Bank infrastructure policy and programmes represents a third substantive limitation of this agenda from a feminist perspective. Here we set out two key ways in which this agenda is problematic: the limited application of gender in infrastructure strategy and the extent to which gender becomes marginalised at the implementation stage. In order to do this we analyse the World Bank's infrastructure action plan before reviewing the gender dimensions of current World Bank infrastructure projects. Our analysis reveals that out of a total of 1878 active infrastructure projects within the World Bank, only twenty-two have gender listed as a theme, most of which only include gender as a minimum percentage of the project.

The World Bank's action plan *Transformation Through Infrastructure* (2012-2015) was published at a similar time to WDR 2012. The plan identifies three pillars through which infrastructure will be delivered: Pillar 1 Core Engagement and sector-based projects; Pillar 2 Transformational Engagement and second generation infrastructure issues, for example collaboration and sustainable development; and Pillar 3 Mobilization of Private Capital (World Bank, 2012a: 3). Gender arguably cuts across all three pillars, however is only articulated in the strategy as falling under Pillar 1. Each sector strategy will include gender targets and indicators, be '100% gender informed' - which is not explained but can be taken to mean consideration of gender in each of the indicators - and include sector-specific guidance notes on gender under Pillar 1 (World Bank, 2012a). The report, in line with WDR 2012, puts considerable emphasis on all infrastructure sectors scaling up their gender operations (World Bank, 2012a: 15). Infrastructure is seen to be lagging behind in the Bank when it comes to mainstreaming gender throughout its operations (Janik (Int.), 2012). 80% of all financing to infrastructure is earmarked for Pillar 1, however there is no specific earmark within the report for gender-based programmes. Another weakness of the infrastructure strategy is that 'gender' and 'gender-informed' are not defined anywhere in the document. The only indication of what gender means is through the case studies used as examples of best practice in the report. As research in gender and development has shown, lack of clarity over the meaning of gender at

the strategy stage often leads to weak outcomes for gender equality in implementation (Ferguson, 2010). In Box 1 ‘Infrastructure for Better Growth – Achieving Gender Equality through Infrastructure Access’ gender is associated with the provision of services to expectant mothers, household energy supplies, and child health and freeing women’s time to engage in economic activities and leisure time (World Bank, 2012a). This box is the only place in the document that mentions gender in any detail. Other sections of the report highlight the need for gender disaggregated data with regard to end users of infrastructure investment (World Bank, 2012a). What we see from the strategy, thus, is an implicit inclusion of gender that follows an instrumentalist approach similar to other Bank projects, in keeping with feminist research on this issue (see for example Warren, 2005; Prugl and Lustgarten, 2006; Milward 2007).

A further loophole within the action plan is that such policy initiatives are only recommendations to the regions and countries to interpret in specific contexts. While the Bank can undoubtedly put pressure on specific countries and regions to include gender disaggregated data in design, implementation and evaluation through additional financing and rewarding good practice, the success of such strategies relies on both the public sector managing infrastructure projects and the private sector financing them. Looking at the regional action plans within the report, only the Latin America and Caribbean region includes gender in its ‘Core Engagement’ section (World Bank, 2012a: 65). No other region (Europe and Central Asia, Middle East and North Africa, South Asia, and sub-Saharan Africa) includes gender anywhere in their action plans. One way of enforcing countries to act on gender in infrastructure projects is to include gender-indicators as a measure of project performance. The indicators included in the strategy results framework are divided into three tiers. The first tier looks at the global development context, and the only indicators that could be loosely termed gender indicators are two out of twenty-two that both focus on inclusiveness: female to male labour ratios and maternal mortality. The second tier looks at country results, this does not contain any gender indicators or gender disaggregated indicators in the set of seventeen. Tiers 3 and 4 have one indicator out of twenty-three that focuses on ‘Percentage of infrastructure projects that are gender informed’ (World Bank, 2012a: 89-91). Overall, despite a commitment to gender loosely built into the infrastructure plan, looking at the indicators and regional priorities demonstrates how gender remains a marginal part of the wider strategy: only one indicator directly uses the term gender, one indicator looks at male and female employment, and one indicator looks at the impact of infrastructure on maternal mortality. As extensive studies in gender and development has shown, if gender equality is not systematically integrated into indicators and monitoring, then gender equality objectives are unlikely to be achieved.

To see how gender fits more concretely within the World Bank's operations it is perhaps more revealing to look at how the action plan plays out within each sector. Each infrastructure sector has its own strategic plan that should, in keeping with the emphasis on gender in the WDR and the infrastructure strategy, have a core gender component. However this is mixed, with some sectors such as water not performing well in this area, and other sectors such as energy being relatively advanced in terms of inclusion at least within infrastructure as a whole. The most recent water strategy was developed in 2003, predating the Bank's emphasis on gender in infrastructure so it is perhaps unsurprising that it contains no mention of gender or gender-based issues or project indicators (World Bank, 2003). As of April 2013 only ten out of 836 active World Bank water projects listed 'Gender' as a theme (World Bank, 2013b). Where gender was listed as a theme, the percentage of the project allocated to gender was extremely small, usually 1%. Of note there was not a significant uptake of gender inclusion in infrastructure projects since gender became a strategic priority for the Bank (World Bank, 2013b).

Transport and ICT perhaps tell a better story. In the Bank's 2008-2012 transport strategy (an updated strategy is yet to be published), *Safe Clean and Affordable Transport for Development* gender is included in the wider context of the MDGs, particularly with regard to Goal 3 on gender equality and empowerment and Goal 5 on maternal health. As the strategy highlights;

Transport will be most effective for development if significant gender differences in demand and impact are properly identified and if transport policies and programs then reflect the full range of transport needs that exist. The identification of differences begins with the appropriate design of transport diagnostics and a participatory process that includes women (World Bank, 2008: 37).

The strategy therefore indicates a commitment to conceptualising the relationship between transport and gender as more than a means to the realisation of other aims such as improved maternal and child health, emphasising the need to recognise differences in the lives of women and men and how they use and access transport. This is translated into the results framework section of the strategy that identifies a key outcome of the strategy as 'Access needs of women and men are met effectively and equitably' (World Bank, 2008: 83). However, tellingly, as of April 2013 only five out of 557 active transport projects had 'Gender' listed as a project theme, no projects had gender listed as a sector. Where listed as a theme, 'Gender' was a low

percentage of the project, being 14% at most. These five projects were also created in the last three years (World Bank, 2013c).

Similar to transport, the ICT strategic plan for 2012-2015 *ICT for Greater Development Impact: Information and Communication Technology 2012-2015* emphasizes the ability of ICT to help address gender inequality, specifically with regard to ‘gender gaps in endowment, including health, education and material assets’ (World Bank, 2012c: 9). Material assets in the strategy refer to land ownership rights and entrepreneurial opportunities through information systems, mobile technology and the internet (World Bank, 2012c). The results framework of the strategy is divided into four tiers in line with the World Bank’s overarching infrastructure strategy. Tiers 1, 3 and 4 do not include any gender outcomes or any emphasis on outcomes disaggregated by gender. Tier 2 has 3/8 output indicators that include gender, mainly relating to disaggregate ICT training and employment by gender.² When looking at the number of active ICT projects in the World Bank, the picture is familiar and in-keeping with other infrastructure sectors. Of 111 active projects, as of April 2013, only three projects had ‘Gender’ listed as a project theme, and none listed gender as a sector (World Bank, 2013d).

The most advanced sector on infrastructure to at least include a focus on gender is energy. The *Energy Sector Management Assistance Programme*, or ESMAP, has highlighted gender as a core component of its two most recent business plans, and has one fully funded 100% gender theme energy project in Papua New Guinea. The origins of this were arguably in the 2005-2007 ESMAP business plan that first acknowledged gender as an important issue for the energy sector and that the sector had previously been weak in mainstreaming gender in existing projects. The plan highlighted the need for an additional publication on gender and energy, and the differences between men and women in their energy needs, requirements and uses (World Bank, 2005). A key solution for this was to expand knowledge in the area of gender and energy. Since then, the current 2008-2013 business plan has built on ESMAP’s previous commitment by including ‘Gender and Energy Development Strategies’ as a sub-component of pro-poor energy access with clearly linked output indicators based on the number of client countries with gender sensitive energy programmes (World Bank, 2008b). In addition ESMAP has worked with Bank Gender Action Plan specialists on aspects of energy such as providing recommendations for mainstreaming gender in extractive industries (Eftimie et al, 2009) and providing assessment toolkits for analysing gender issues in artisanal and small-scale mining

² These are: ‘Persons trained in IT skills under WB projects disaggregated by gender’ ii) ‘Employment in IT/ITES supported by IFC and disaggregated by gender’; iii) ‘Number of women employed in Village Phones Programs supported by IFC.’

(Eftimie et al 2012). In this sense, the energy sector is perhaps the most advanced sector in infrastructure that engages with gender teams within the Bank to enhance gender-based assessments and projects.

However, while gender is included as a core component of the results framework of the business plan it is not included in any of the key outcomes or indicators of ESMAP's wider monitoring and evaluation outline (World Bank, 2013e). Moreover, as of April 2013, only four out of 374 active energy projects listed gender as a theme (World Bank, 2013f). One of the four fully active projects is the 100% gender themed 'PNG Social and Environmental Impact of Extractive Industries' in Papua New Guinea. What is revealing about this project is gender was not initially seen as an issue in the country when discussing energy policy. In general meetings women contributed little to discussions until meetings were held with men and women separately and women's participation 'exploded' (Janik (Int.), 2012). In addition to this specific project, ESMAP is trialling pilot studies on energy and gender in Mali, Tanzania, Kenya, Benin, Senegal, Liberia and Mozambique. This would tentatively suggest further gender-focused initiatives in the future. However, one ESMAP official expressed a concern for 'paralysis by analysis' of such studies (Janik (Int.), 2012). For gender specialists working in sectors such as ESMAP and in partnership with the gender unit of the Bank the trick to integrating issues of gender is working with key individuals at the country level and energy groups, and establishing indicators and markers of progress in specific projects and strategies (Janik (Int.), 2012). In this sense, much of the work follows a familiar pattern of World Bank sharing knowledge or teaching country partners how to do gender and implementing specific targets to measure and encourage a commitment to that end. Partnerships both within and outside the institution are key to external institutional pressure and internal awareness of the issue and credibility.

This review of how gender features in existing World Bank infrastructure strategies and projects reveals the following. First, gender is not defined anywhere in sector strategies or projects yet is framed with regard to women living in poor countries and how different types of infrastructure assist their entrepreneurialism, education, and access to information that is in keeping with WDR 2012's focus on women's agency. Much of the rationale of a gendered approach to infrastructure does not fit with a gender and development approach – which explicitly engages with power dynamics - but rather has more of a focus on women and the needs of expectant and new mothers, a key theme that comes up across the sectors. This is perhaps not surprising given that maternal health is a MDG. However, this conflates the issue of maternal health with gender equality and women's empowerment. While maternal health is

an important part of many women's lives and gendered power relations, it is not itself an indicator of a gendered approach to infrastructure planning and projects. Second, gender is addressed within these projects through an array of aims, targets and indicators at the broad level of infrastructure strategies and within key sectors such as energy. Gender is not fully addressed in the water sector, which is perhaps a key omission given the role of women in the collection and use of water in the household in many developing countries. These aims and indicators address gender as something to be measured in terms of how infrastructure projects affect women and men differently, and whether a project or sector has at the minimum taken gender into consideration, or at best fully mainstreamed gender into operations and projects. Third, the aims and objectives of integrating gender into infrastructure projects fall down when it comes to implementation. Out of a total of 1878 active infrastructure projects within the World Bank, only twenty-two have gender listed as a theme, most of which only include gender as a minimum percentage of the project. Only one infrastructure project is 100% gender focused. Few monitoring and evaluation frameworks included in specific projects list gender as an input or output indicator in project evaluation. Implementation of gender strategies in infrastructure programmes remains at the pilot stage.

5. Gender and infrastructure: stuck in instrumentalism

We have set out three limitations of the current approach to gender and infrastructure from a feminist perspective: limited research on gender and infrastructure as a whole; a narrow framing of gender equality in the World Bank; and highly limited integration of gender into infrastructure policy and programmes. We now aim to explore in more detail the reasons behind these limitations. By looking at this issue through a feminist lens, we highlight some key points about what this means for our understanding of the practice of contemporary development.

The first key reflection on gender and infrastructure concerns the challenges of integrating gender into a primarily technical sector. To date, gender issues have generally been considered within the remit of social development – health, education, poverty reduction etc. However, as set out in the literature review above, there is a clash between the 'social' focus of the gender equality agenda and the 'technical' focus of infrastructure. This partly arises from the lack of specialisation of technical experts in gender, and of gender experts in technical issues. As such, the two worlds (gender/social vs technical/scientific/pragmatic) fail to speak each other's language. As Clancy (2009) notes, energy is seen by social scientists as 'too technical to be of relevance and the background and daily work of engineers and economists

working in energy has little linkage with social policy.’ While water engineers have in practice tended to have a good relationship with social scientists and gender experts, the same has not been the case with energy (Clancy, 2009: 4). In part, this is because the tools used for gender analysis do not meet the needs of energy planners (Clancy and Skutsch, 2003: 18). In terms of ICTs, there has been a strong tendency to view new technologies as gender neutral, and engineers have given little consideration to the symbolic value of technology or the use of technology (Olatokun, 2008: 53). The same issues are apparent in the transport sector, as transport remains a neglected area among gender specialists, while transport specialists are still reluctant to take on gender issues. Transport institutions are dominated by male civil engineers who are focussed more on ‘delivery and outputs than on perspectives and needs of users’ (Porter, 2008: 286). As in the energy sector, the tools and methods used by gender experts are not favoured by transport engineers and planners.

The second key reflection is that as a consequence of this mis-match between gender knowledge and technical engineering knowledge, the rationale for including gender has not moved beyond discussions about linking infrastructure to the needs of women as an area of human development and specifically their role in contributing to the attainment of development targets such as a reduction in infant mortality. In practice, the gender dimensions of infrastructure are reduced to maternal and child health and the role of women in biological reproduction. While the Bank in part acknowledges gender differences in interactions with infrastructure, such acknowledgement fails to translate into outcome. Such an approach is limiting and the World Bank could move beyond a human development focus on gender and infrastructure. We believe that conceptualising forms of ‘big’ infrastructure-based development and ‘small’ human development creates an artificial distinction. Such a distinction reinforces notion of gender issues as reducible to women having babies, women needing more education, and women’s social rights. Safe motherhood and infant mortality have long been used as indicators of gender equality and the advancement of women by institutions such as the World Bank. However this in many respects overlooks the myriad gender issues involved in infrastructure planning and projects and the gendered outcomes projects may intentionally or unintentionally produce. There is a need to rethink how gender fits with World Bank projects, specifically for our purposes in the field of infrastructure. We can see that attempts have been made to remedy this in the WDR 2012. However, as shown above, this attempt to theorise the linkages between gender and infrastructure is not reflected in any substantive way in current infrastructure policy or practice. This concurs with broader findings that ‘the links between the discursive shifts introduced by the flagship publication and the

policy conditions attached to World Bank loans (and spelled out in the Memoranda of Understanding between the World Bank and governments that borrow from the World Bank) are somewhat tenuous' (Razavi, 2012: 424). Infrastructure could be an opportunity for thinking about gender beyond the narrow confines of human development, yet at the current juncture this opportunity is being missed.

The third key reflection is the instrumentalist focus of women's agency in infrastructure programmes. Women's agency is framed as a core means of gender equality and a source of achieving its gender strategies by the Bank in the 2012 WDR. Agency is defined in WDR as:

An individual's (or group's) ability to make effective choices and transform those choices into desired outcomes. Agency can be understood as the process through which women and men use their endowments and take advantage of economic opportunities to achieve desired outcomes. Thus agency is key to understanding how gender outcomes emerge and why these are equal or unequal (World Bank, 2012b: 150).

The Bank acknowledges that women's agency is deemed to matter in and of itself, but also stresses how it matters in the more instrumentalist terms of women's human capital and the lives of their children and their children's future behaviour (World Bank, 2012b: 151). However, WDR 2012 does demonstrate a reframing of agency to some extent by moving beyond merely discussing women's bargaining power within the household and exploring notions of collective action, women's movements and feminist groups (Razavi, 2012: 3). In spite of this, as argued above, this reframing of agency in WDR 2012 is not reflected in the infrastructure financing and strategy. Rather, women's agency is centrally framed in an instrumentalist manner – that is, how infrastructure investment will enhance women's contribution to the economy and the biological and social reproduction of children. This is particularly the case when looking at the gender indicators, where included, across the four infrastructure sectors. Kabeer's research on agency as not only the ability to act but also the *sense* and perception of possibility of one's agency and social status and indicators is particularly revealing here. Access indicators – as included in infrastructure indicators – tend to focus on decision-making agency and women's ability to effect change in 'valued achievements' such as child mortality, this for Kabeer (1999: 452) 'can be taken as evidence for more *effective* agency on the part of women but does not, by itself, testify to a *transformative* agency on their part'. This distinction between effective and transformative agency is useful here, and will be discussed further in the conclusions. Again, the problem here

is how methods of enhancing women's agency can be incorporated into development projects. Moreover it highlights the need to go beyond narrow ideas of gender as women's issues of child birth and maternal health to encompass the gendered power relations that exist in the design, implementation and use of infrastructure projects and programming. This has been a recurring problem in development institutions historically marginalising gender to an issue of human development and subsequently adopting an instrumentalist approach to how women's agency is enacted in such confines. WDR 2012 has changed this in part, but as infrastructure projects in the World Bank demonstrate, women's agency and gender are still very much within the confines instrumentalism, either with regard to productive labour in a 'smart economics' sense or the reproduction of healthy children. This is a missed opportunity for infrastructure programmes. The shift towards a more transformative form of women's agency and the attempts to integrate gender into infrastructure projects and planning is a significant step in the World's Bank approach to policy. However, in their current form these steps represent an opportunity that is yet to be realised.

6. Conclusion

The World Bank's attempt to integrate gender into its infrastructure strategies and projects is an ambitious and welcome addition to both the debate and practice of international development. However, through our feminist analysis of infrastructure, we suggest that the Bank has missed two crucial opportunities. The first is to move away from the narrowly defined instrumentalist approaches to gender mainstreaming that stress the benefits of specific projects and women's agency within them as allowing women to enhance their own productivity and improve maternal and infant mortality. While the WDR 2012 stresses women's agency matters in and of itself, the translation into policy through priority areas, indicators and thematic inclusion shows that gender is marginal to infrastructure projects and where present is only instrumental in helping women support their children and the functioning of markets. As such, there is little space within the current infrastructure agenda to develop notions of transformative agency, meaning that outcomes in women's agency are likely to be limited. Instead, we propose a more substantive exploration of the ways in which infrastructure projects can be directed towards transformative notions of agency, and what might be required in order to this to be achieved.

The second missed opportunity is that in taking such an instrumentalist approach, issues of gender remain marginalised in the realm of human development. Rationales for including gender in infrastructure are framed in Bank policy documents as having intended consequences

for specific MDGs and women's agency as understood in WDR 2012. This missed opportunity means that the Bank's approach to gender in infrastructure just builds on an already weak and criticised understanding of gender developed substantively in the Bank's human development operations. Attention to independent feminist analysis of previous Bank strategy and wider reflection of feminist thought within the Bank itself would go some way to addressing this missed opportunity. In addition, in this paper we propose a reconceptualisation of the relationship between gender and development, asking what a gender approach to 'big' development might look like. This would entail moving beyond a narrow focus on the ways in which women and men interact with infrastructure to critically explore the gender power relations at work in infrastructure planning and implementation, and developing strategies for overcoming such gendered inequalities.

The World Bank's infrastructure portfolio will come to define its future endeavours and the inclusion of gender within this will be of paramount performance. Slight changes are already being made since the Bank made gender inclusion a priority, and more projects and regions are at taking gender into consideration their planning. As this article shows, there is clear evidence to suggest that the Bank is taking gender as a serious concern in infrastructure projects. This shows a marked contrast to the World Bank infrastructure projects of the 1980s and 1990s, and is thus to be commended. However, questions remain about how to do gender in infrastructure and hence the solution becomes the default option of borrowing from ideas of gender mainstreaming from areas of human development and framing such efforts within the Bank's existing operations. Institutions such as the Bank have to justify resource expenditure and planning in regard to wider operations and beneficial outputs so a degree of instrumentalism is inevitable. However we argue that unless the Bank acknowledges such limitations and problems with this then gender will never fully be included in infrastructure projects as ultimately such justifications will become obsolete to the myriad concerns such large scale projects present the Bank and its implementing partners. Attempts to include gender in infrastructure programmes are welcome and show the potential for the Bank to do gender differently, but as this feminist analysis shows they could go further to address the missed opportunities while such projects are in their infancy. In this article we have made a preliminary survey of the World Bank's approach to gender and infrastructure. Two key issues remain for a future research agenda on this topic: a more substantive analysis of power relations in gender and infrastructure policy and practice; and a more detailed understanding of the ways in which gender equality concerns evaporate in the implementation process.

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