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Migrant homes
in more-than-human cities

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Naeela and ***Aydin***,

who have been left with no choice but to endure two PhD students as parents!

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2. Alam A, McGregor A and Houston D. (under review) Beyond anthropolitics: the more-than-human politics of homemaking through complying, transgressing and reimagining. Environment and Planning D: Society and Space.
3. Alam A, McGregor A and Houston D. (accepted, under revision) Neither sensibly homed, nor homeless: Re-imagining migrants' home through human-nature relations. Social and Cultural Geography.
4. Alam A, McGregor A and Houston D. (under review) Unbounding home for housing the homeless in contested cities. In the special issue 'Thinking Relationally About Housing and Home' in Housing Studies.
5. Alam A, McGregor A and Houston D. (under review) Migrants in more-than-human cities: making a case for 'care-full' urban planning. Planning Theory.

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Abstract

My thesis adopts more-than-human geographical insights to consider how non-human agencies actively shape homes and home-making practices. It explores seventeen rural migrant homes that are informally negotiated in vacant lots in the urban fringes of Khulna city in Bangladesh. These homes are outside the slum stereotypes usually discussed in the developing world context. The broad research question I ask is: how can more-than-human concepts contribute to the understanding of these homes and inform planning with these migrant communities?

The question is answered under three empirical threads. First, I seek an appropriate approach to explore more-than-human processes of homemaking while minimizing researcher influence. Focusing on feminist geographers' articulation of 'response' I devise a participatory photography method called 'photo-response' that facilitates families to reflect on their relations with the non-human agencies that inform the politics, practices and materiality of home.

The second thread is organised around three themes. First, I explain the ways migrants engage with non-human agencies to negotiate informal access to land and create a sense of home. Second, I develop the concept of more-than-human imaginaries to identify the homemaking practices that contribute to material homes. Third, I utilise the concept of unbounding to explain the ways these homes are sustained by activities that extend beyond the boundaries of home and rely on the broader urban ecologies of the neighbourhood.

The final thread considers the implication of these migrant spatialities in rethinking a more radical participatory form of planning that I call 'care-full' planning. I argue for the recognition of the actually existing more-than-human care relations to approach planning for more-than-human cities with and being sensitive to marginal multi-species communities.

Overall, my thesis produces alternate accounts of marginal lives and homes beyond Western and human-centrism, highlighting the importance of 'lay' knowledges in rethinking more-than-human cities.

Statement of Originality

This work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

Macquarie University Faculty of Science Human Research Ethics Sub-committee has approved this thesis, reference number: 5201400923.

A F M Ashraful Alam
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Acknowledgments

My PhD, to date, has not been a solo journey. I have encountered many who have enriched my intellect and supported me in many intangible and material ways. This is the section where I would like to acknowledge their kind contributions.

First, I acknowledge the numerous non-humans and their agencies that have contributed as significantly as my human peers to this PhD. Adopting a more-than-human approach to research is challenging but I find it equally perplexing to move beyond the human emphasis on knowledge production to write these acknowledgements. However, it would be ungrateful of me to fail to mention the centrality of the contribution my inanimate peers have made to my intellectual enrichment within the PhD!

Indeed, had I not encountered the first disposable film camera on an Officeworks[1] shelf during a lazy weekend morning, had we not clicked over the following week experimenting with our collaborative potential, the outcome of this PhD would be quite different! Thanks to the essential two dozen disposable cameras, the Dictaphone, a dozen *AAA* batteries, a pack of *2B* pencils, the *B5* sketchbook, and the fieldwork diary that travelled precisely 9,047.39 km with me to meet my research participants in the field. The objects connected with the human participants to generate the data on which this thesis was later built block by block. Thanks to my MacBook,

[1] Officeworks is a chain of Australian office supplies stores.

which, in the past five years, became my trustworthy prosthesis; it grew old with me, its titanium shine faded somewhat, it slowed down a little but never let me down! I am grateful to a set of tunes that embraced me, cared for me and kept me from the distractions of the outside world while engaging with my most feared job in this thesis, the writing. Thanks to the coffee mug, the wall calendar, the books and texts – the list could continue *ad finitum*, so, I rest here.

I am grateful to Andrew McGregor and Donna Houston, my supervisors. Without your trustworthy supervision, I cannot imagine coming this far; you have made this journey enjoyable. I am yet to measure the depth of your patience in living with my (apparently) meaningless early drafts, which I too found difficult to follow later. But, you saw something in them and guided me through. I am blessed to be a part of this wonderful team!

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It is the family who perhaps sacrifice the most in the process of an early career academic in the making. My parents, who mostly watched me growing old on computer screens during the PhD years – words are inadequate to explain your contribution! Thanks for all the '*duaa*' (well wishes) over all the hurdles in my life! My late *Naani* (grandmother) who raised both my brother and I, I am sorry that I could not be at your side during your last days. Rest in Peace, *Naani*!

Momtaj, who has held my hand for the last twenty years first as my fiancé, later as my wife and now as the mother of our two wonderful children – thanks for the many sacrifices you have made, relinquishing your own PhD hours so that I could complete mine – your contribution has been precious! Finally, Naeela and Aydin, who have been left with no choice but to endure two PhD students as parents! I entirely dedicate this thesis to both of you. Ultimately all that drove me on this pedagogical journey is the hope that my offering of knowledge contributes to a better planet where you have the opportunity to thrive along with your more-than-human denizens.

Preface

Although my interest in home has been constant, I didn't immediately consider it as a research topic. It took even longer for me to unwrap the layered meanings and materialities hidden in the concept of home. I first worked on homes as a graduate architect, for approximately five years, primarily serving the elites of my hometown of Khulna city in Bangladesh. My clients were high-officials from both the private and public sector, non-resident Bangladeshis (NRBs), and industrialists. The richer my client's financial portfolio the more extravagant I could be in designing their homes. My expertise was considered of little value unless my designs meticulously conformed to the clients' social status and cultural choices. Material references of facades, balconies and stairways in those homes were often drawn from architectural magazines and soap operas popular at the time. I soon became disenchanted with designing for these burgeoning classes; indeed, when the physical necessity of a shelter extends into an unhealthy display of money and power, it becomes a bottomless pit. Soon after, I decided to call a halt to my participation in this elitist form of homemaking.

In contrast to these years of practice, my thesis, in many ways, has embraced the idea that a successful home is more than an eclectic assemblage of cherished materials, waiting for an expert to put them together. In fact, my thesis opposes the understanding of a home as solely a human cultural construction, nor do I conceive of the home as manifested only through human agencies. Rather, the imagination and materiality of the home is co-constituted by the diverse interplay of (non-human) nature

and (human) culture (Kaika, 2004). Throughout this thesis I have dwelt on this alternate ontology of rethinking housing/home. I have done this by working with landless rural migrants, some of the most marginal communities in Bangladesh, examining how they made a home in the city. Rather than focus on migrants in urban slums my thesis has explored migrant communities who negotiate homes on urban fringes. Their ordinary[2] spatiality has changed my understanding of home and the city, and how it might inform an urban planning agenda in the less affluent areas of the city.

So, what is the reason for such an undertaking? Why take an interest in communities that typically would not fit into my clientele portfolio and why leave an architect's privileged life for the financially unrewarding journey of a full-time PhD student? In 2009, I undertook a Master of Science degree in Urban Planning at the University of Hong Kong. It was an intense pedagogical upbringing that encouraged a scientific mind, and yet there were moments when I was encouraged to leap beyond the rational bent. Increasingly, I began to ask questions outside my comfort zone. The fieldwork in the urban renewal sites of Hong Kong's *Wedding Card Street* as part of my Master's dissertation was, for me, remarkable. My intimate encounters with displaced communities provided an opportunity for me to rethink the kind of *science* to which I should aspire. My previous role as an architect was questioned by Dr Mee Kam Ng. In the *Ethics in Planning* class, she cautioned, "as an architect you are trained to champion successful architects, you take their styles as the lead, when would you learn

[2] I refer to Robinson (2006) who suggests that 'ordinary' (cities) are distinctive and unique with potentials to have a different understanding beyond dominant (she refers to colonial) narratives.

to champion people?" This type of confrontation later provided a grounding for me to attend to the marginal and less privileged accounts around me.

In 2013, I travelled to Australia to pursue my PhD. My family was granted permanent residency shortly afterwards. Alongside starting research on homemaking, I literally had to work out how my family could call Sydney a pleasant 'home' and comfortably settle down. Migration is probably never easy, even the relatively privileged one that we pursued. Especially for my then five-year-old daughter it was a strange place where Christmas neither appeared in winter nor did anybody around her speak the same language. On her first day at school she asked me if she could be a 'proper' Australian by doing well at school or, if her hair would turn blond when she managed to acquire a 'proper' Australian accent. These apparently silly questions in her little mind surfaced as part of her anxious struggle to feel 'at home' in a new place. The questions were deeply disturbing at that time! However, over time, I observed her at school singing *Advance Australia Fair* with genuine emotion. I saw her sitting grief-stricken for the Matildas[3] after they missed the penalty shoot-out in Rio. Other telltale instances were reassuring of my family's growing sense of homeliness in *diaspora*. My professional chauvinism, the expert homemaker inside me, was disintegrating fast enough for me to recognise my old notion of home as merely an expert-driven physical manifestation!

Further into the PhD, my understanding of home broadened as I was exposed to a range of feminist geographic literature on home/homemaking. This scholarship has reinforced my understanding of home as having both tangible and affective dimensions.

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[3] The Australian women's national soccer team is called the Westfield Matildas.

Home is "shaped by everyday practices, lived experiences, social relations, memories and emotions… *it is* intensely political, both in its internal intimacies and through its interfaces with the wider world" (Blunt, 2005: 506, 510). Home can be extremely intimate, visceral; it can be felt under the skin. However, at times these feelings can also extend across the scale of household, neighborhood, city, state and beyond (Blunt and Dowling, 2006). Rethinking home in certain ways can help its occupants play (emancipatory) politics (Ruming et al., 2012) of space across transnational scales (Law, 2001). The geographic scholarship has transformed my perception of home. For me, home started to appear as an interesting lens, a useful vantage point, to explore larger political, economic and ecological discourses and their localised implications at the intersections of domesticity. And I realised, and was becoming increasingly aware, that perhaps the homeless community's encounters with the city could reveal more troubling discourses.

There were other moments or encounters with knowledge that further shaped my research. A few months into my PhD, I was introduced to the book, *Hybrid Geographies: Natures Cultures Space* (2002) by my PhD supervisors. I became fascinated by the more-than-human philosophies in which any inquiry fundamentally begins with the question of what is 'in excess' of the human, and what is the usefulness of what is left out (Whatmore, 2002; 1999; 2004). My thesis builds on the humble acknowledgment that the world is made up of 'heterogeneous entanglements' (see Latour, 1999: 274; also in Whatmore, 2002: 3) of human and non-human *others* who reflexively co-produce practices and places. My interest in more-than-human approaches grew further through the Whatmore-book-reading group led by Dr Fiona Probyn-Rapsey at the University of Sydney's Human Animal Research Network

(HARN). There I met Prof. Sarah Whatmore herself, the key proponent who has promoted the term, 'more-than-human'. She recommended a number of constructive critiques (Braun, 2005; Demeritt, 2005; Philo, 2005) that significantly matured my understanding of the concept. Overall these knowledge encounters made me increasingly aware of the potential of 'thinking through' (see the explanation in Whatmore, 2013) non-human agencies, objects and elements of nature to develop alternate (and relational) understandings of the humanised (rational forms of) politics of space.

On the eve of my fieldwork, I was rather unsure how to research in, with and as more-than-human worlds, despite the fact that by then I was completely immersed in these philosophical insights. The key challenge was how I could explore the more-than-human dimensions of marginal homes beyond anglo-expert-centered and anthropocentric ideals; what techniques I could devise to 'do more' (Dowling et al., 2016: 3) rather than relying on only the conventional repertoire of humanised 'talks and texts' (Whatmore, 2006: 607). Whatmore and Landström's (2011) research on 'flood apprenticeship' was a beacon of hope. Their use of the concept of a 'competency group' inspired me to create experimental spaces for the community themselves to think through agencies of nature that surrounded them and inform research. John Law's collected edition, *After method: Mess in social science research* (2004) has further cultivated a deepening sensitivity. It gave me the courage to take a 'risk' and adopt inquiries with 'deliberate imprecision' (Law, 2004: 3) so that I could attend to 'the indistinct and the slippery' – the less represented migrant communities and the entangled non-human agencies collaborating to create homes. It was a deliberate choice not to confine my field within a pre-given frame. I wanted to know more about the

hidden 'others' who constitute my field and have different intentions and possibilities but are often problematically left out as "a hinterland of (the) indefinite" (Law, 2004: 14).

So, I decided to emancipate myself in the field and threw away the last vestiges of my life as an architect and a planner. I adopted an 'assemblage of methods' (Law, 2004: 13) by combining both visual and performative techniques to ensure that my participants could generate their own data by thinking through the diverse "heterotopic *human and non-human* alliances" (Gandy, 2012)[4] around them. I tried to offer a more situated mode of enquiry in which a participatory photography method named 'photo-response' (Alam et al., 2018) became a major component. Photo-response has given my participants opportunities to discuss their home as they desired through recognising their relationships with non-human agencies (e.g., water, plants, animals, soil, etc.) of the broader urban landscape and to think through the practical and material implications of these relations. Later the fieldwork also involved walking interviews and group discussions to tease out the nuances of migrant struggles in cities as part of their co-production of the more-than-human home.

Having drifted even further away from my earlier practicing life, the PhD project, in many ways, has produced stories of multiple 'margins'. The words, such as marginality/margins, non-representation, less-representation have appeared frequently throughout the thesis – through the selection of the research topic, the (more-than-human) ontological choices made, the identification of research sites, the inclusion of research participants and so forth. Firstly, the researched homes sit within the broader

[4] My own emphasis is italicised.

discussion of the political ecology of urban informal settlements in the context of the global south. Yet they sit at the margins of the overly researched slum (and informality) discourse. With a more-than-human lens I have pursued different pathways to address urban informality. Secondly, the discussion of home from a more-than-human perspective is not often researched outside the sphere of wealthy and mostly Western modern homes. There are few exceptions (for example, see Shillington 2008 and Hovorka 2008) that contribute to knowledge of and from the margins. Thirdly, the research has geographically taken place on the margins of Khulna city, in Bangladesh. With few planning controls in effect, these peri-urban fringe sites are dynamic spaces of 'hope' (Harvey, 2000) in the shadows of the planned city. Fourthly the research engages with migrant housewives whose voices are often marginalised in planning and development processes. How do they make sense of home outside the margins of the ordered city, despite the absence of ownership deeds and formal institutional supports? As these women chose to actively participate in the fieldwork, I also deliberately chose to stay in the margins and let the margins speak for themselves. All these layered accounts of margins inform my thesis.

Through this preface I have intimated that the project has been both a professional and personal journey of finding 'home'. The project has transformed an aspiring architect working in elite circles into a curious and more humble researcher who has become sensitive to the capacities and vibrancies of mundane things, entities, objects and communities. The journey revolved around my constant interest in home. Beyond the specific knowledge contribution about migrant homes, I argue for reimagining home as a vantage point to explore the nuances of the 'urban'. Home can tell us who we (human and non-human) are, where we come from, how (sustainably or

otherwise) we live, where we are heading in our career pathways, how we treat others, how we socially, politically and economically engage in cities and much more. The more we feel at home with a particular place, the more we tend to take care of it.

Reimagining home in different ways can provide alternatives to rethinking cities beyond fetishizing the neoliberal city. Cities can no longer be seen only as elitist projects that foster exclusionary processes through the contestation of non-conforming 'others' – whether they be marginalised humans or the non-human agencies of nature. My project shows ways that home can produce hopeful trajectories for remaking an inclusive city. Using theories and methods entirely different from my previous training in architecture and planning, I have tried to shake off these disciplines. The project has taken me through uncharted territories. In realising it, I have drifted from my academic and political training to somewhere else, beyond conventional human politics. Now I tend to find satisfaction in thinking of myself as a feminist thinker. Through this scholarly journey I have learned to happily endorse myself as a less-than-expert, yet, my enthusiasm for experimentation, collaboration and the co-production of knowledges about places and practices has risen more than ever!

A F M Ashraful Alam
Sydney, April 2018

Introducing the Research

Chapter 1: Introduction

1.1 Researching migrant homes on the urban fringe

> … for people like us, help ran out so fast, and we were left with promises and hopes which were difficult to rely upon … so we had to voyage to the unknown, to the town. Some of us left at once, some did and still come and go … After we reached Khulna, some of us took shelter in the *Basti* (slum in Bengali), but for me, I could not survive there more than a month. With two children and an old mother-in-law, the 10ft x 10ft single room was suffocating enough. We had to cook within the same room. Every morning my husband had a long queue at the door of the common toilet used by several families. So, we decided to step back. We came down to open lands, where we could breathe, phew! Since then, we are living on others' land. We changed the location once in the last eight years …
>
> … In the first few months, we did not even have any address to share; this is the time when we started to become invisible. You tell me, how can you know my misery if you cannot see me? Government also turns away from 'nobodies' like us. Local politicians do not recognise us until they are sure of us adding up to their vote bank … So, in the end, we

need to mend the cracks and tears on our own. (Charming[1], migrant household head in Krishnanagar, Khulna)

The multiple hardships experienced by Charming and other participants in securing a home in Khulna city resonate with the struggles of many peasant families who, after being rendered landless or homeless, or both, in their original locality, move to major cities in Bangladesh. The families either originally belonged to the poorest rung of the economic ladder of rural Bangladesh or they were forced into such marginal status due to various climate-induced hazards in coastal areas. Having failed to secure options for survival on their home ground, they chose to undertake the precarious and uncertain journey to the city. There has to be hope for a better life elsewhere, however much of a 'gamble' it might be (Kartiki, 2011; Poncelet et al., 2010). For migrants, many of whom have primarily been involved in farming, dwelling in cities has its own pitfalls and precarity. Significant trauma is associated with the change of lifestyle, lack of appropriate occupation, inadequate and uncertain living conditions, lost social status and networks, financial insecurities, cultural prejudice, and much more. Despite these many negativities, rural communities continue to pour into cities, with the volume of migration doubling between 1997 and 2014 (BBS, 2015).[2] As is evident from the interview with Charming, regardless of many deprivations and marginalisation imposed by urban actors, people find ways to negotiate habitable spaces, utilising their own

[1] The name is changed to retain anonymity.
[2] An increase of 77% in the number of slum households over the 17 years since the 1997 census (against and increase of 366% in the number of slums over the same period) is observed (BBS, 2015: 21).

capacities from the bottom up. This thesis explores these processes of negotiation, looking at how rural migrants negotiate urban homes outside of slums.[3]

My study takes place in Khulna city (Figure 1.1), the third largest city in Bangladesh. It is an administrative seat for the Khulna District and Khulna Division. Khulna has developed as a regional hub due to its distinct geographical advantages. Since as early as 1833, Khulna began to develop as a regional trading hub as it is closely linked to Kolkata, the capital of British East India between 1772-1911.[4] Mongla, the second largest sea port in the country, is just 50 km away. Khulna's excellent connectivity with the regional hinterland through both riverine and rail networks has influenced the flourishing of private and state owned heavy industries, such as jute mills, paper mills, hardboard mills and the shipyard, and later the shrimp and fish processing industries. With its steady economic growth in the last century, Khulna city has always been an attractive regional hub for rural migrants from the coast. Due to the high rate of regional rural to urban migration, on average, 42-44% of the population of Khulna is regional migrants.[5] Alarmingly, Khulna also has high concentrations of economically disadvantaged populations.[6] Once migrants from villages, they now live in large concentrations of informal settlements, typically identified as slums and other non-slum areas, such as in the fringes of the city.

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[3] BBS (2015: 5-6) defines a slum as the "cluster of compact settlements of five or more households which generally grow very unsystematically and haphazardly in an unhealthy condition and atmosphere on government and private vacant land. Slums also exist on the owner based household premises. Often population density and concentration of structures are very high, sometimes, multiple structures are situated in one decimal of land."
[4] See the history of Khulna in Mitra (1914 /2000).
[5] See Table 2.3 on lifetime net migration 1961-1998 in KDA (2014
[6] Khulna is nationally in the third position among all urban centres (BBS, 2015: 32-34).

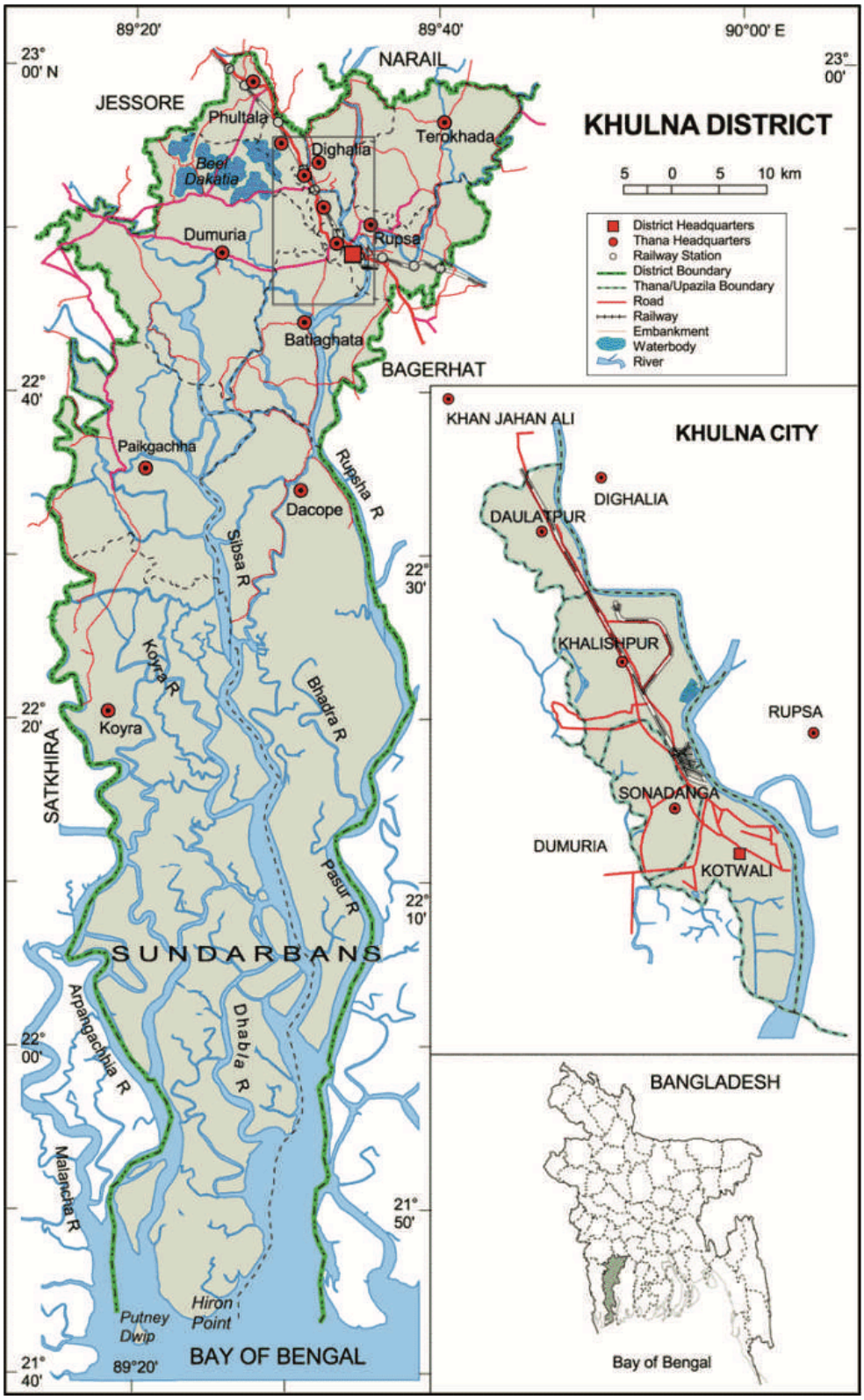

Figure 1.1: Khulna city in Bangladesh

Source: Adapted from Banglapedia (2014).

In the context of Bangladesh, landless rural farmers seeking a decent life in cities became very visible from as early as 1970, but the major flow of migrants to cities increased significantly in 1988 in the aftermath of the worst tropical cyclone (cyclone *Bhola*) in the history of Bangladesh to date, followed by coastal flash floods (Mallick, 2014). Successive tropical cyclones in 2007 (*Sidr*), 2008 (*Nargis*), 2009 (*Aila*), and 2013 (*Mahasen*) have resulted in increasing numbers of rural populations pouring into cities (Darby, 2017). A recent estimate suggests that migration has risen to a volume amounting to whole populations – "every day, 4,000 Bangladeshis are moving to cities in search of a safer life away from the challenges of increasingly extreme weather" (Roy et al., 2016). It is predicted that with a one metre sea level rise, some 14.8 million rural people are likely to be internally displaced (Khan, 2014), increasing pressures on a limited number of coastal urban centres that are the likely destinations for most of them (Ahsan et al., 2011). This will clearly test and perhaps break the already resource constrained capacities of Bangladeshi cities, particularly second and third tier cities such as Khulna, Barisal, and Jessore, which typically offer far fewer economic opportunities than those available in the capital city, Dhaka, or the affluent port city, Chittagong. Opportunistic migration is well known for contributing to many unforeseen impacts on the capacities of cities (Ahsan et al., 2011).

In the climate change-induced displacement scholarship, a variety of terms are used to describe the different aspects of rural migration to cities. These include migration with family or without family, internationally or internally, temporary or permanent, forced or voluntary, and sudden or more chronic (see detail summaries in Mallick and Vogt, 2015; Mallick 2014; Warner et al., 2010; Gemenne, 2011). According to Alam et al. (2015), in the Bangladeshi coastal context, displacement from

the origins as well as migration to regional centers is often a class based response by rural landless farmers. As per the definition of voluntary relocation provided by King et al. (2014), Charming and other participants in this PhD thesis are displaced villagers who have voluntarily migrated from their villages and settled in destinations primarily on their own without formal institutional support, but in the context of a changing climate. They relocated to Khulna city between five and 25 years prior to the time of the fieldwork in 2014. I describe the study participants as rural 'farmers-turned-migrants' whose displacements have been caused by various climate change stressors in their coastal villages. The thesis did not focus on the specific climate stressors that caused their displacement; instead, it rather builds on how these populations informally negotiate spaces in the new urban context.

Urban authorities often struggle to cater for uncontrolled and informal populations within city limits. The inability of the state-led housing market to support the overwhelming number of new inhabitants with affordable formal housing has forced many of these populations to seek shelter in slums, the informal ghettos that lie in close proximity to the business districts (CBDs) from where they can avail economic opportunities (BBS, 2015). The dominant narratives portray rural farmers-turned-migrants as able to contribute significantly to the city's 'economic growth' as a cheap and under-waged labour force in the city's industries and various construction sites, mostly serving private companies and urban elites. However, in the end, they still remain homeless subjects, as neither the government nor the market offers any long-term solutions to reinstate the migrants with any sense of home (Hakim, 2013a: 4). The most recent Slum Census Report (2015) shows that the majority of these migrants take refuge on privately owned land – 70% of migrants in Dhaka and 54% migrants in

Khulna are located on private land. The rest are located on government owned vacant lands in cities. Such lands are often controlled by powerful urban elites until required for public infrastructure development. In the context of Khulna, a 2005 survey estimated that about 19.5% of the then city's population lived in 520 low-income informal settlements (Angeles et al., 2009).[7] The 2014 Slum Census Report documents that the number of informal settlements in Khulna city has increased to 1,684, housing 12.08% of the nation's total slum population (BBS, 2015: 18).[8]

The existing urban planning systems of major cities in Bangladesh are neither capable at present, nor will be ready in the near future, to deal with these increasing 'population excesses'. In addition to the fact that the sheer volume of migrants is beyond any manageable situation, the migration of populations is often chaotic and always informal. This adds further difficulties to developing any feasible strategies for housing the homeless in cities. As a predominantly economically poor cohort, migrant communities lack the resources to secure any formal legal entitlement/tenure to urban space. This lack of legal recognition discourages government agencies from intervening.

Roy et al., (2012) argue that there are neither any international nor any national level strategies and actions in place to tackle the housing challenges of these disadvantaged communities in cities in Bangladesh. At the national level, there is a lack of a low-income settlement policy and, as a consequence, poor urban settlements are

[7] According to Angeles et al., (2009), 1,88,442 persons lived in slums of Khulna in 2005.
[8] Bangladesh Bureau of Statistics (2015:19, 35) reports that within the Khulna City Corporation (KCC) area, there are 1134 slums housing 8% of the nation's total slum populations.

often disregarded in official documents and plans (Roy et al., 2012), if not rendered invisible. Moreover, at the city level, any incentives from the upper echelons, either donors or the government, are often politicised based on the location of these communities. If they are renting space in established slums which are controlled by powerful urban elites, they are more likely to enjoy some benefits, but others squatting in isolation outside the controlled spaces may face deprivation. In her study on the city of Calcutta, Roy (2009; 2011) has shown that dominant actors often shelter the pro-poor communities and force them to serve their vested interest and political motives, yet the quality of living still remains sub-standard. It is a complex situation in which formal urban planning agents often choose to avoid conflicts with powerful private actors.

It has been argued that beyond the statistical figures in census reports, a detailed understanding of how the communities negotiate shelter in cities remains underdeveloped; informal communities and their housing struggles only received a 'birds eye view' (Hakim, 2013a), and lacks a clear picture of if and how these communities can become successful homemakers in cities. For example, research on climate migrants' negotiation of home has been approached through a 'pro-poor' lens (Sowgat, 2012; Ashiq-Ur-Rahman, 2012), a term that is used to argue for a 'poverty reduction agenda' (Sowgat et al., 2016: 15). Such an approach towards disadvantaged migrants has criticised the economic growth agenda of Khulna's urban institutions, including the lack of attention to those living in informal settlements. My thesis argues that the approach is short sighted. The 'pro-poor' framing further makes these communities look economically vulnerable and often noncomplying to the city's growth narratives. Further, this approach undermines the many positive aspects and

creativity that these communities utilise to mend *'their own cracks and tears on their own'* (Charming's quote). Without recognising the need to facilitate migrants' actual existing practices, the studies suggest a modernist planning agenda in view of improving the overall 'living condition of the city' (Sowgat et al., 2016).

In contrast, some research has focused on more detailed understandings of how many grassroots innovations by migrants flourish in cities as part of the negotiation of home (see Parvin et al., 2016; Jabeen and Guy, 2015; Jabeen, 2014; Roy et al., 2013; Roy et al., 2012; Jabeen et al., 2010). However, to date, research on rural migrants' negotiation of home in major urban centres in Bangladesh has been largely concerned with experiences in slums. Much of this research generalises climate migrants as 'slum dwellers', or '*Basti-Basi*' in Bengali (Hakim, 2013b).[9] This has resulted in an impoverished understanding of the struggles of a large number of 'climate change displacees' who come to cities and make homes outside slums. As detailed by migration research on the context (Mallick and Vogt, 2015; Afsar, 2003), for migrants coming from the agriculture-dependent economic structure of a rural livelihood, there is little incentive to continue their previous livelihoods in urban areas. On many occasions, it has been observed that the urban planning agencies do not even recognise cities as having compatible spaces where agriculture-based livelihood options can be facilitated. Thus the overall understanding of these rural migrants is severely flawed when it comes to identifying the nature of their struggles. The communities sometimes choose to settle in spaces outside slums where squatting occurs and these are severely under-researched.

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[9] Hakim (2013b) mentions the limitation in framing the 'peasant-turned-migrant' communities in Khulna city. There is no term in Bengali with a similar meaning as that of 'rural migrant'. All migrants in Khulna city are generalised as '*Basti-bashi'* meaning 'slum-dwellers'. Occasionally they are also defined by reference to their regional origin.

This thesis contributes to addressing this lack by exploring rural migrant communities' homemaking efforts in Khulna's fringes in Bangladesh.

Roy et al. (2013: 160) caution that there is a large unexplained gap between the statistical figures and the actual number of informal migrants and their informal spatiality. Nationally 5.5% of informal settlements are outside established slums, instead being listed under the statistical category of 'other urban areas' (BBS, 2015: 29). These non-slum populations, through government census initiatives, become the 'others' in census statistics, and thus remain under-accounted for and provided with few services. As Charming states in her interview, they become *invisible* over time. Alarmingly, according to a recent census report, the number of migrants living in these 'other urban areas' has doubled to 2.2 million since 1997 (BBS, 2015). In the context of Khulna, Ahsan et al. (2016) identify that although 47% of his sample respondents who are climate migrants in Khulna city live in established slums, the remaining 53% live in the urban fringes, including roadside public lands, riverbanks and natural drainage sites – technically, 'other urban areas'. Among them about 18% of migrants still choose to locate themselves on agricultural lands on the urban fringes. Their lives, lifestyles and homemaking strategies have fallen through research gaps, being less understood and under-represented in research on informal urban settlements. These are the communities who inform this PhD thesis. I deliberately explored these landless[10] migrant communities who choose to avoid settling in slums and ask how and why they

[10] The Land Occupancy Survey (LOS) of 1977 and 1978 defined three categories of landless: household with no land whatsoever, those who own only homestead but no other land and those who own homestead and 0.2 hectares of 'other' land. NGOs often define them as 'ultra-poor'. Our participants fall under the first category (FAO, 2010: 5, Bangladesh section).

locate themselves in spaces outside slums and how their stories can inform understandings of home/homemaking, informal urbanisation and urban planning.

The participants who are the focus of this study have been uprooted from their coastal rural origins and reach Khulna city with minimum financial assets. They choose to live in the urban fringes that are still predominantly engaged in agricultural activities. The current Khulna Master Plan (KMP 2001) covers an expansive fringe area of 181.16 sq. km which is termed as 'urbanising areas' with "basically rural and agricultural land" (KDA, 2014). These are potentially ambiguous quasi-urban-quasi-rural spaces due to an absence of a detail planning control since the inception of KMP 2001.[11] Despite these fringes' legal status within the city limit, the ambiguity continues, as is evident in the later sections of the thesis when some participants identify that they are living outside the city limit whereas others identify their houses within the city. Without formal 'rights of access' to urban land, they negotiate informal patron-client 'relationships of access' (Ribot and Peluso, 2003) to unoccupied peri-urban land.[12] Migrants then utilise their agrarian skills and experience to establish livelihoods in the fringe ecologies. They take care of the patrons' plants, animals and water in line with their patron's interests, in order to secure a home. Over time, non-human agencies in the fringe ecologies bind together migrant communities and a range of other actors, such as absentee patrons, neighbouring elites and fellow migrants, into relationships that sustain homes – the details of which have been excluded from previous research. Despite ongoing precarity reproduced by uneven power relations and ambivalent local

[11] Only the Detail Area Development Plan is drafted in 2014, still it is not gazetted.
[12] See Ribot and Peluso (2003) for different definitions of 'access' as alternate forms of 'ability to derive benefits from things' in the absence of formal rights.

authorities (Sowgat et al., 2016) some homes have continued in this way for more than two decades. This thesis adopts a more-than-human lens to shed light on how homes are secured through the agencies and relations of actors within these fringe ecologies. The informal negotiation of habitable spaces in the city furthers the geographic scholarship of homes and homemaking while the insights gained are explored for new ways to perform planning in informal cities.

1.2 The conceptual terrain: more-than-human, home and homemaking

In this section I describe the key themes that underpin the more-than-human geographies of home and homemaking that contribute to the thesis. The themes are selectively drawn from the feminist and more-than-human geographies of home and homemaking to inform a framework for exploring the key empirical focus of this thesis – how rural migrants negotiate home in cities. The migrants in this study take refuge at the edge of Khulna city in Bangladesh. In the absence of formal institutional support, and through involvement with human and non-human agencies, they create their own spaces to meet the requirements of sheltering in the city. They utilise their farming skills and cultural knowledge inherited from their agrarian origin to engage in agricultural services which are critical in negotiating the informal homes. Such negotiation involves a range of actors and agencies in the urban landscape in which some are human but many are non-human. The non-human agencies of animals, plants, water, earth and weeds of urban ecologies create the 'affordances' (Gibson, 1979/1986) of home by

extending the home to the broader urban assemblages beyond the material house.[13] In various ways, these study homes challenge the typically perceived western (modern) home's separation between culture and nature, human and non-human, inside and outside.[14] They unsettle the expert (and popular) framing of the house-as-home as a human place that is separate from nature, making them non-conformant to the city's anthropometric (and economic) narratives and perpetuating their absence in planning and politics. To overcome such non-representation, I build on an approach that foregrounds the capacities of non-human agencies in the company and modality of humans in order to recognise migrant strategies of securing home and the socio-ecological complexities in urban space.

There are, however, significant difficulties in appreciating the dynamics of non-human agencies, as often the dominant (humanist) discourses about home and the city are undergirded by an ontological exceptionalism of humans (Houston et al., 2017). Knowledge about places and practices is imbued with deeply humanistic attributes determining the social, political and ecological processes that sustain and make them (ibid). Home is understood as a space for the human, constructed through mobilising human labour and expertise by capitalising, using, exploiting, transforming non-humans to meet human expectations. The most successful home from this perspective

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[13] According to Gibson (1979/1986), "the affordances of the environment are what it offers the *individual (animal in original),* what it provides or furnishes…it implies the complementarity of the *individual* and the environment" (p. 127).

[14] See Kaika (2004) for the discussion of home's separation from nature – "the modern house becomes the modern home (an autonomous protected utopia) through a dual practice of exclusion: through ostracizing the undesired social as well as the undesired natural elements and processes. The social and spatial implications of the exclusion of social processes have been analysed and detailed in numerous studies in geography, architecture, anthropology and sociology" (p. 266).

would leave non-human nature 'outside'; nature can only be invited in after a significant level of 'abstraction' (e.g. water is chlorinated, timber is seasoned, etc.) (Kaika, 2004). Having a non-anthropocentric vantage point helps ground the thesis in more-than-human situated realities that allow an understanding of how the migrant homes are lived in and made known beyond the anthropocentric parameters and the assumptions of dominant experts. Such situated relations are vital to the understanding of how migrants adapt to cities amidst multiple uncertainties. In the following sub-sections, I draw on key insights from geographic studies of the more-than-human and home to inform my approach to the thesis. I hope to adopt an approach that can overcome the challenges of latent anthropocentrism in researching home and homemaking as well as appreciate alternate and less prevalent knowledges[15] about them.

1.2.1 Thinking through the more-than-human

> Humanism is a discourse which claims that the figure of 'Man' naturally stands at the center of things; is entirely distinct from [the other kinds of man (woman),] animals, machines and other non-human entities; is absolutely known and knowable to 'himself'… the discourse relies upon a set of binary oppositions, such as human/inhuman, self/other, natural/cultural, inside/outside, subject/object, us/them, here/there, active/passive, and wild/tame. (emphasis added) (Badmington, 2004: 1345 in Castree et al., 2004)

[15] Inspired by Suchet (2002: 155), I deny the existence of any singular knowledge, but "the word 'knowledges' in this context is used to refer to the fundamentally different ways people know, understand, relate to and make meaning of 'worlds'" (see Driver 1992; Rose 1997).

A more-than-human approach unsettles the centrality of 'Man' in the humanist legacy described in the above quote. It draws on works in feminist and post-human geographies[16] to propose a shift in rethinking the previously unquestioned human subjectivity that reduces everything else to objects whose purpose is to serve the human. It is worth noting here that post-humanism has precedents in the postcolonial, post-structural and feminist critique of enlightenment, masculinity and knowledge. The first post-human philosophical currents (Agamben, 2004; Fukuyama, 2002; Derrida, 2002) continue criticising the modernist discourse of man. These highlight the necessity for an increasing vigilance on the representation of man in texts and language often deployed to establish man's dominance over *others*.[17] Identity, knowledge and power, these values were rarely attributed to other than humans who are astonishingly diverse but are collapsed under a single category, called 'non-humans'.

Later post-humanism in its second current makes a distinct shift away from the earlier deconstructionist currents and takes a different stance (Latour, 1993; 2004; Whatmore, 2002; Haraway, 1991), in which the decentring of human agency is proposed by giving a deeper attention to the material world where there are fluid (and practical) relationships continuously taking place between (human) society and (non-human) nature. Moving from earlier analysis of 'man' in the language and discourses, Bruno Latour, one of the pioneering figures of this current, highlights the complex interrelations between the imagined autonomy of 'social' and natural' domains in our everyday practice and places. In particular his approach, the Actor Network Theory

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[16] See Panelli (2009) and Whatmore (2013) for the three currents of more-than-human approach.

[17] According to Badmington (2004), the others refer to both human (e.g. different class, race, ethnicity) and non-human categories that suffer non-representation. See also Derrida, 2002.

(ANT), has informed and explained more complex and extended associations of 'human in nature', which might otherwise remain obscure through anthropocentric 'purification and translation' (Latour, 1993).[18]

A later current, sometimes referred to as the third phase of post-humanism, is named 'more-than-human' in which (Whatmore, 2006; Nimmo, 2011; Lorimer, 2010) the human-nature 'relational' gaze is further broadened to acknowledge the profound and multiple significances of non-humans in the heterogeneity of everyday life. To identify the contributions that non-humans hold in a relationship, 'agency' is considered not an exclusive property of human beings, but on the contrary, non-humans are also acknowledged with agential capacities.[19] (Nimmo, 2011: 111; see also Latour, 2005: 63). The concept of agency is also extended with the use of the term 'actant' to denote agencies having the capacity to 'act' or perform, hence they become signific-'ant'.[20] This is a key difference from earlier currents that effectively mobilises the potentials of non-humans, as described by William Paulson,

> ... it is not enough to decide to include nonhumans in collectives or to acknowledge that societies live in a physical and biological world as useful as these steps may be. The crucial point is to learn how new types

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[18] Latour (1993: 10, 11) hypothesises the construction of modern man is the product of two interlinked sets of practices. The first set of practices, by 'translation', replaces human's networked existence in nature with new types of hybrid networks, such as technology, supermarket chains, etc. The second, by 'purification', further creates two distinct ontological zones: human culture and non-human nature, and they are perceived separate.
[19] See Nimmo (2011) for discussion on the differences between two approach, ANT and more-than-human. Also see Laurier and Philo (1999) for the criticsm of ANT – it flattens the world in such a manner that all actors are seen as equal, or thought as an equal lens in a flat matrix, which is differently perceived in more-than-human approach where actors or agencies are seen having unequal capacities, but they need to be acknowledged equally.
[20] See chapter 1 in Whatmore (2002) for discussion of the actant.

> of encounter (and conviviality) with nonhumans, …can give rise to new modes of relation with humans, i.e. to new political practices. (Paulson, 2001: 112)

Referring to the above quote, Whatmore (2013a) further simplifies the invitation to redraw the connections between the non-human and the political by framing some critical questions:

> What is 'in excess' of humanism, what is left out, and what is the importance of what is left out and how the category of the human and our own social lives are actually built and made and in the process of being made? (Whatmore, 2013a: video, 16 min from commencement)

With the humble recognition of human's 'excesses' and their usefulness, the approach "disrupts the purification of nature and society and the relegation of non-humans to a world of objects" (Whatmore, 2002: 165). The approach challenges the ways the 'modern' human 'purifies' himself from non-human nature and replaces nature by 'translating' entirely new types of beings and networks (e.g. commodity chains) around him (see Latour 1993). In contrast, more-than-human philosophies call for the non-modern approach to decentre the dominant human positionality in the assemblages and change the status of non-humans from their object status to subjects. Overall, the approach identifies human-non-human assemblages making and re-making through being in relationships, not as the mere "retro-production of human labour onto an object of nature but a sturdier (stronger), much more reflexive co-production of

places richly invested within a collective *more-than-human* practice" [my own emphasis] (Latour, 1999: 274 cited in Whatmore, 2002: 3).[21]

Significant scholarly discussions have explored the human-nature connectivities of everyday life in the last two decades. Much of the research has taken account of animals and plants as the broad theme (see Table 1.1 for reference). A relatively large number of works among them, approximately one-third of the studies, have explored multispecies encounters and practices that are premised in urban and cultural geographies. The scholarship on practices, encounters and performances has cast a diverse range of spatial settings (e.g., home, hospitals, touristic sites, camp sites, military establishments, sea beach, homeless sites, sites on the move, etc.) in different light. And more-than-human scholarship is fast expanding and becoming more diverse by increasingly proving useful in studies, such as disaster research. There are works experimenting with fieldwork to suggest innovative methodologies for researching with the more-than-human world (Guthman and Mansfield, 2013; Moore and Kosut, 2013; Richardson-Ngwenya, 2013; Greenhough, 2006; Lorimer, 2010). More recent works beyond my initial literature search include Bell et al. (2017), Vannini (2015), Suchet-Pearson et al. (2013), Wright et al. (2012) and my own work (Alam et al., 2018) within this PhD.

[21] See also Tsing, 2013: 36.

Table 1.1: Topic-wide articles in more-than-human research 2003-2013[22]

Year	Animal and plant as broad topic				Other topics	Total
	Animal, plant encounters	Food, agro-food industry	Biotechnolog, conservation studies	Practice & Performance		
2003	3	3	2	0	6	14
2004	8	2	3	6	15	34
2005	6	1	5	8	19	39
2006	12	3	5	3	31	54
2007	9	3	2	11	34	59
2008	9	1	9	8	53	80
2009	4	2	9	8	45	68
2010	12	3	10	8	32	65
2011	11	1	3	9	32	56
2012	8	3	6	6	41	64
2013	16	3	11	10	68	108
Total	98 (15.2%)	25 (0.4%)	65 (10.1%)	77 (15.6%)	376	641
	265					
%	41.3%				58.7%	100%

Source: Author's literature review

While much research has taken account of animals and plants to gain knowledge beyond anthropocentric assumptions about places and practices, the more-than-human approach faces minor criticisms regarding the lack of inclusion of non-living 'things' or objects within the consideration of more-than-human sociality (Instone, 2004). Some recent articles have expanded works to recognise the agencies of non-living things. Bennett (2010; 2004) is a key proponent who highlights the vital agencies of 'things' that include *dead* bodies, objects and their arrangements. These apparently inanimate bodies are not dead at all, but hold lively capacities to change the human condition,

[22] The table is generated as part of a systematic quantitative literature review, following the approach of Roy et al. (2012) and Pickering and Byrne, (2013a; 2013b) to identify articles that have discussed the more-than-human theme as outlined in Whatmore (2002). Original research papers published in English were identified in scholarly databases. Scopus, Science Direct, ProQuest, Web of Knowledge and Google Scholar databases were used. Keywords used for the search included: 'more-than-human', 'hybridity', 'non-human', non-human agency/ies', 'non-human actant/s', 'hybrid' and 'hybrid geographies'. Articles that cited Whatmore (2002) were included in the final database. Databases were searched between October and December in 2013.

routines and routes. Practices and places are always in the making "in composition with nonhumanity, never outside the sticky web of connections or an ecology [of matters]" (Whatmore, 2006: 603). Bennett uses the term vitality to describe the capacity, the 'thingness of things' and calls for the vitality of even the most mundane (non-human) objects (e.g. rats and trash) to be taken seriously to expand the realm of more-than-human assemblages. As she explains,

> By 'vitality' I mean the capacity of things – edibles, commodities, storms, metals – not only to impede or block the will and designs of humans but also to act as quasi agents or forces with trajectories, propensities, or tendencies of their own… it has efficacy, can do things, had sufficient coherence to make difference, produce effects, alter the course of events. (Bennett, 2010: viii)

Apart from the studies of material culture, only a handful of research studies with a distinct more-than-human focus has expanded the exploration to non-human objects, and they have shown immense potential to rethink the role of these objects in binding human subjects with routines, livelihoods, and affects.[23] These works have shown promise in rethinking alternate socio-natural discourses opposed to the anthropocentric and traditional capitalistic attitude towards the environment. The works that have appeared in the last decade highlight how human life course take shape through influences of objects and agencies beyond human intentions and design. For

[23] Material culture studies in geography have a long history of engaging with objects that are culturally significant and meaningful to human subjects. However, the studies do not explicitly privilege non-humans with agential accounts, therefore, they are not discounted any political subjectivity.

example, a recent work emphasises the 'vital' agencies of the forest to trace out human-non-human development assemblages (McGregor and Thomas, 2018). The forest is seen to shape politics through its regenerative abilities, combustibility and ability to store carbon and so shapes development pathways, culture, community lifestyles, ecosystems and economies. Other works include exploration of the non-living objects of carbon (Lansing, 2010; 2012; Randalls, 2011), tides (Jones, 2011), elements of weather (Adams-Hutcheson and Longhurst, 2017), forest (Kohn, 2013) and fire (Franklin, 2006a).

The different currents of post-humanism and the more-than-human approach in particular, provide me with deeper sensitivity about the relational nature of places and practice that have underpinned my investigation of rural migrants' homes in Khulna city. I foreground the presence of non-human animals, plants, objects, elements of nature that are relationally assembled and able to inform home and homemaking practices with alternate and often less discussed attributes of politics, affects, materiality, competency and interactions in more-than-human cities. For me, non-humans appear to be an intermediary to overcome latent anthropocentricism and deny that spaces are human achievements only. Thinking through the agencies of non-humans offers me "a rich array of senses, dispositions, capabilities and potentialities" (Whatmore, 2006: 604) of socio-material worlds to generate alternate "social meanings, recognise uneven power relations and inform politics" (see also Panelli, 2009: 84). Places and practices are made known beyond the realm of conscious judgment and knowledges (Hinchliffe and Whatmore, 2006: 136) that often hide multiple realities by privileging the singular pervasive one. Instead I am able to communicate with places that are lived with a different kind of consciousness built on affect and embodied

attachment. Recognition of these affective and corporeal dynamics in the more-than-human 'contact zones' (Haraway, 2008: 4, 35) can offer an understanding of migrant homes that are as imaginative as they are material.[24] It is a call for including non-humans as the embodied extension of human beings and explore the political potential of such contact zones. Often these contact zones appear as 'spaces of care' and 'collective capacities' that communicate the practice of living in the world,[25] and can be a useful lens to recognise how migrants negotiate home building on more-than-human strategies in the fringes of Khulna city.

Together the above insights equipped me to take a more-than-human approach to research. However, I am aware of some of the criticisms of these approaches. For example, more-than-human perspectives have been sometimes critiqued as being too eclectic and 'too relational' (Philo, 2005: 824) to have any convincing method of inquiry (Duncan and Duncan, 2004). I overcome these limitations by recognising that the approach requires a different kind of positionality, or in Haraway's words, a 'vantage point' (1997: 269). As explained by Pryke and Whatmore (2003), the approach "does not espouse a particular philosophy, although its engagements and commitments position it philosophically" (Pryke et al., 2003: 6; see also Whatmore, 2005: 843). I shall elaborate on this further in chapter 2, explaining how my position restricted me

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[24] By the term contact zone, Haraway (2008) emphasises the importance of body (*figure or flesh*, in her word) in approaching human-non-human entanglements, not from the distance, but through corporeal engagements – the affect, morality and materiality contribute to a particular world-making.

[25] The non-western ontology of 'caring as country' has been discussed as part of the literature review section of chapter 7 where I explained the human-non-human contact zones of migrant homes as care relations. The ontology has connotations with more-than-human approach, as it also acknowledges that humans are part of the Country and not separate from it. Spaces emerge as human-non-humans in reciprocal relationships of Caring as (part of) Country (Bawaka Country including Sandie Suchet-Pearson et al., 2013).

from drawing concrete lines "with a yes or a no, but more *I went on* generating connections and proliferating lines of inquiry" [personal emphasis] (Wolfe, 2003: xix). I ventured for an ontological openness that can communicate research. In Wright's (2014: 12) terms, "there is no pre-existing world to be reflected…. Rather, the performances, practices and affects" (Wright, 2014:12) should inform research in different ways if I am ready to "take risk" and "supplement the familiar repertoire of humanist methods that rely on talk and text with experimental practices that amplify other sensory, bodily and affective registers" (Whatmore, 2006: 606).

The more-than-human 'turn' in geography that has developed alternate knowledges about home and homemaking, will be discussed later in this chapter. First I present the conceptual developments in critical feminist geography and material culture studies that primarily oppose the idea of home within the envelopes of the house. This work positions home as sites of performances and relations, not always material but also imaginative. Rethinking home in these ways is helpful in approaching the uncertain and informal homes of this study that remain linked to multiple places in Khulna's fringe ecologies.

1.2.2 Approaching home and homemaking

Home, in early humanistic geographers' interpretation, has been idealised as the place of safety, familiarity, authenticity, belonging and all those attributes that 'positively' create a distinction between its inside and the often-alienating outside world (Moore, 2000). The dominant Western imagination of the twentieth century has often portrayed the modern home as a happy place with certain 'gendered stereotypes' (Chapman, 2004), such as a perfectly coiffed, petite woman in the kitchen space

involved in culinary duties. Such gendered imagination of home became and is still today a powerful instrument to inform the materiality and politics of home, as for instance,

> the notion of home as haven, as a sanctuary from society into which one retreats, may describe the lives of men for whom home is a refuge from work. It certainly does not, however, describe the lives of women for whom home is *already a* workplace. For many women, home is also a space of violence, alienation, and emotional turmoil. (Dowling and Power, 2013: 291)

Unlike such opposite ideas of home revealed in the above quote, the earlier geographic imaginations of home seem to remain homogeneous. They often "exaggerate the emotional nobility of the home" (Ehrenreich and English, 1978), normalise and obscure alternate and non-normative ways homes are lived and valued.[26] The 'ideal' home was constructed through the creation of many binary oppositions between inside and outside, male and female, work and home, public and private, safe and unsafe (Chapman and Hockey, 1999) and home was seen as private, feminine, safe and away from work. In contrast, later feminist scholarships of home have heavily engaged to portray both sides of the oppositional valences of home. They have expanded the understanding of home and its relation to the wider social reproduction repeatedly, asking how home is made and sometimes (un)made or deconstructed (see

[26] See Gorman-Murray (2006; 2007a; 2007b; 2008a; 2008b) to understand domestic values and gendered identities beyond the universally stereotyped and normative constructions.

Baxter and Brickell, 2014).[27] These later works, discussed in the following paragraphs, enriched my approach in exploring the precarious migrant homes, as my study homes are complex and situated at intersections of multiple and oppositional characteristics, such as formal and informal, sedentary and mobile, legal and otherwise, that contribute to their imaginative and material construction.

Moving away from the earlier approach, critical geographic scholarship has discussed the ambiguous and contradictory analysis of home by highlighting that home is both a material and mental space having both tangible and affective dimensions (Blunt and Dowling, 2006; Blunt and Varley, 2004; Law, 2001; Meah and Jackson, 2016).[28] There is a significant difference between the materiality of a house and the imagination of home that is permeated with 'feelings of home' (Blunt and Varley, 2004: 3). Feelings of home are as imaginative as they are material, because the home is perfomed through the body and the body needs to be comfortably connected to matters and material places. The notion of embodied feelings of the house-as-home has been captured by Hetherington,

> Whereas we enter our houses through the front door, we enter our homes through our slippers. Or, rather, we enter home as place through the praesentia that it conveys. We sense a form of presence/ present in that entry… The feel of the key in the latch, the click as it opens – or perhaps we need to nudge it in just the right place because it sticks a bit – are all

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[27] Baxter and Brickell (2014: 134) draws on work by Porteous and Smith (2001: 12) on "domicide" to define unmaking of home as "the precarious process by which material and /or imaginary components of home are unintentionally or deliberately, temporarily or permanently, divested, damaged or even destroyed".
[28] See Brickell (2012) for the historical development in critical geographies of home.

> familiar experiences that place us within the familiar. The place is not in the slippers or in the sticking door but in an absence made present in what these experiences reveal to us –in this case the familiar, the routine, the ordinary, the known, through which we can recognise ourselves as particular subjects. These qualities are not represented by the slippers, but performed by them. (Hetherington, 2003: 1939)

The mundane objects of slippers and doors enact the feelings of home when they are seen, touched, smelt, and hence embodied; the material presence of the objects and subjects in particular time-space construct the home sensually – that which Hetherington refers to a 'praesentia'.[29] Imre (2004; 2005), through his works on disability and housing, also reinforces such argument that the feelings about and experiences of home cannot be "dissociated from their corporeality or the organic matter and material of the body" (2004: 745). The studies establish home's tangible and intangible dimensions as experiential, shaped by everyday routines and lived social relations (Blunt, 2005: 506). The dimensions succeed through corporeal attachments, meaning home needs to be performed beyond the construction of house.

In addition to the bodily performances constituting home, feminist geographic scholarship has highlighted the gendered dimensions of home, arguing that the bodily identities and social relations shape the particular imagination and materiality of home. A significant amount of research has examined the construction of different gendered identities of home that describe the complexity of social relations and feelings

[29] Hetherington (2003) acknowledges that the notion of 'praesentia' has some similarity with the notion of affordances (Gibson 1979/1986) that I discussed in the previous section.

intersecting within the home. These relations subvert the heteronormative domestic ideals to inform particular production of domestic materiality and practices, including those non-normative dimensions that sometimes contest social conventions (Gorman-Murray, 2006; 2007a; 2007b, 2008a). For example, the presence and activities of queer human subjects negotiate the mateirality of home-space in different "spatial frames – external, internal and interstitial" (Gorman-Murray, 2016; 2017), which are diffferent from those normative homes that are generally distributed in binary forms, such as interior and exterior spaces, male and female spaces or private and public spaces. In normative homes, the material space of the interior, especially the kitchen, has evolved for confining women with childcare, housework, and other tasks of domestic labour (Meah and Jackson, 2016; Chapman, 2004). Material spaces with the assignment of particular tasks in them are central to the subbordination of women as their tasks are culturally devalued and financially unvalued.[30] There are other kinds of gendered expressions: for example, Walsh (2011) documents migrant British citizens' homes in Dubai as sites of masculine identities and social relations in the diaspora, informed by diverse material practices such as the display of a trophy, the creation of a soundscape, or the accumulation of rugs in the living room.

Objects have signficiant assocations with home. Material culture studies have extensively explored the social meanings of home derived from the dialectic interplay between (non-human) objects and (human) subjects (Lane and Gorman-Murray, 2011: 5). Home has been understood through the cultural appropriation of objects informing particular 'styles' of 'dwelling' and manifesting particular forms of spatialisation of the

[30] See the discussion of feminism and domesticity in Dowling and Power (2013) for details.

(human) dwellers' culture (Anderson et al., 2003; also explained in Blunt, 2005: 506). Rose (2003) investigates the contribution of family photographs and discusses their material arrangements inside the home. Watkins (2003) describes the contribution of meaningful possessions and disposable objects creating routines of housework and the particular materiality of home. Young (2004) has shown the material value of colour for presenting home in particular ways and their relation to real estate values. Tolia-Kelly (2004) used the materialist lens to examine the place of paintings and phtotographs in the process of 'making home' for South Asian women in Britain. The studies portray how objects with relational 'effects' that are independent of our awareness of them (Jacobs and Malpas, 2013: 281) inform a tangible home.

The studies have increasingly recognised home as multi-scalar, with researchers highlighting the feelings and the sense of homeliness as not necessarily contained within the physical boundaries of home. The key question is raised if "the houses in themselves hold any guarantee that *home* [dwelling in original] occurs in them" (Heidegger, 1971: 146). Massey has theorised home in terms of flows within and between places as "it had always in one way or another been open, constructed out of movement, communication and, social relations which always stretched beyond it" (Massey, 1992: 14; see also Massey, 1994). Various social, cultural practices of homemaking put the home in a 'reciprocal relationship' with the outside through 'transactions' of resources (Dayarante and Kellett, 2008). Blunt and Dowling (2006: 2) argue that the feelings, ideas and imaginaries of homes are intrinsically spatial, related to context, extending across spaces and scales, and constructing and connecting to places. Identity and a sense of belonging to a home are secured through appropriation of landscapes beyond the home "across diverse scales ranging from the body and the

household to the city, nation and globe" (Blunt and Dowling, 2006: 27). These works imply that the belongingness to home can be imagined and felt in multiple places. New spaces outside the physical home can be re-produced through homemaking and imbued with a sense of homeliness. Examples include the reproduction of Filipino domestic helpers' labour in Hong Kong to secure their material home in the Philippines (Law, 2001).

To summarise this section, the critical geographical works of home and homemaking underpin my understanding that home is complex, paradoxical, gendered, multi-scalar and most importantly performative in contrast to the earlier depictions of 'house-as-home'[31] as an isolated private space. In the following section I shall further explore how a more-than-human imagination of home makes these attributes more apparent through a more localised lens focused on fluid human-non-human relations co-constituting home and homemaking practice. The insights of this section are helpful in the research context of rural landless migrants whose negotiation of home is often multi-sited and performed in the fringe ecologies beyond a shelter. Several studies (Cook et al., 2012; Dayaratne and Kellett, 2008; Kellet and Moore, 2003) have highlighted the usefulness of these experiential dimensions of communities in understanding the struggle, as often the struggles do not fit within the institutional discourse of accessing home through mortgage-enabled purchase and legal ownership. In the following section, by approaching the more-than-human home I shall recognise how home also transcends the dualistic division between human and nature and its

[31] See Power (2009b) for different interpretations of house-as-home.

potentials in rethinking homemaking in marginal and temporal circumstances exceeding humanist and expert assumptions.

1.2.3 Approaching the more-than-human home

It has been observed that a distinct home culture has been glossed over in the imagination, materialisation and their conceptualisation in geographical works which denote a particular form of (urban) dwelling. The modern home becomes significantly different from the earlier rural ones of pre-industrial periods. Home becomes a premise for embodying modernist ideals and culture and the construction of home requires a range of experts who are trained in that particular culture. The imagination of home is constructed as the opposite of nature and cut off from the unruly nature outside. The most successful home could leave behind nature and the natural processes outside of it. In this section, I have further recognised how home can be understood by unsettling its earlier humanist imagination of separating nature and how many non-anthropocentric agencies contribute to home. This understanding reinforces my approach to researching migrant homes.

The growing recognition of non-human influences on places and practices (Whatmore, 2002; Latour, 2005) has taken a post-human turn in geography and influenced research on homes.[32] Such studies oppose the idea that the western (modern) home has,

[32] See for details in foundational works of Kaika (2004) and Hinchliffe (2003; 1997).

> become constructed not only as a line separating the inside from the outside (a house), but also as the epitome, the spatial inscription of the idea of individual freedom, a place liberated from fear and anxiety, a place supposedly untouched by social, political and natural processes, a place enjoying an autonomous and independent existence. (Kaika, 2004: 266)

The studies recast the material home as much more than a solely human construction; instead it is seen as reliant on the capacities of non-human agencies in shaping domesticity. Unlike the material cultural tradition, in which (non-human) agencies and objects are meant to be relying on humans' meaning-making and mobilisation, thereby, their mutual cultural dialectics informing home, a key difference in the more-than-human turn is that neither human nor non-human is "deterministic in its own right" (Lane and Gorman-Murray, 2011: 5). Instead, acknowledging more-than-human thinking, home is made through the active contribution of both human and non-human agencies and the relational dynamics evolved in their contact zones. Non-humans' 'vital materiality' (discussed above) (Bennett, 2010) is seen to complement human homemakers with essential capacities to perform homemaking practices and negotiate home. In this tradition, non-human objects (Steele and Vizel, 2014), elements of nature (Kaika, 2004), animals and plants as pests and pets (Power, 2009a) are seen to co-construct the home through their exchanges and circulations within the home and beyond. My thesis is premised on this non-anthropocentric ontological stance in which home is a more-than-human co-construction. This approach will be useful to explore my study homes as they sit in the relatively non-urban fringe ecologies, and which may

have offered the participant homemakers necessary 'affordances' (Gibson, 1978).[33] Homemakers' relationships with fringe ecologies may provide more localised understanding of how these homes are negotiated without supports from formal institutions.

Dowling and Power (2013) have provided a detailed summary of more-than-human geographies of home through their depiction of four interwoven strands. First, the material production of home is an act of separating the human space from the 'outside' unruly and variable nature. For example, through the use of climate or lighting controls outside of the diurnal or seasonal rhythm (Hinchliffe, 1997) such as locating windows in outside walls. The second thread of research imagines that the material home is produced not by separating nature from it but through connection to and reliance on natural processes, such as the provisioning of water and energy (Kaika, 2004; Hinchliffe, 2003; 1997). For example, the dwellers' relation to natural light, water and plants is part of an imaginary directed towards visual comfort, cleanliness and psychological pleasure, informing consumption practices and shaping the physical characteristics of home (e.g. sunrooms, swimming pools, gardens) (Atkinson, 2003; Bille and Sørensen, 2007; Head and Muir, 2007). The third body of works highlights the home as a site for human-nature co-habitation (Franklin, 2006b; Power, 2008; Head and Muir, 2006) and confrontation (Power, 2007; 2009a) in which more-than-human relations imbue the human dweller's familial satisfaction and sense of home and shape domestic 'routines' and practices (such as, bird-watching, pet-walking or gardening). Subsequently, these relations influence the production of the material domestic space

[33] Or 'praesentia' (Hetherington, 2003), however, I acknowledge its differences, as pointed out by Hetherington, from affordances (Gibson, 1978).

through the choice of physical house-form as well as the use and appropriation of neighbourhood spaces (Power, 2009b; Fox, 2006; Wilkinson et al., 2014). The final area of research recognises the active agencies of non-living entities, objects, elements or materials (e.g. family photographs, religion, colour, or mortgage finance, to name a few) (Cook et al., 2013; Mazumdar and Mazumdar, 2009; Young, 2004). Although they have some resonance with earlier material cultural studies of home and homemaking, they have made a distinct focus to highlight how non-human agencies mobilise humans' actions and placements.

More-than-human approach offers alternate understandings of home in a variety of ways. The approach unsettles the latent anthropocentrism that positions human dwellers as the dominant agents constructing home by extending the scope of 'the *dwelling* subject' to non-humans (Longhurst, 2001; 2003). The shift in subjectivity helps to break open the categorical separation between human and non-humans, creating opportunities for knowing home through the capacity of 'inter-subjective body communication' (Crouch, 2001). In this way, domestic spaces can be interpreted in ways beyond humanist representations (and/or non-representations) of gender, culture, poverty and their linked social imaginaries. Studies on diseases, pests, plants and water discuss at length the corporeal nature of homemaking practices and their material manifestations (Gandy, 2006; Kaika, 2005; Wolch, 2002; Wolch et al., 2002; Shillington, 2008). They suggest that human-non-human corporeal relations are able to communicate diverse meanings, qualities and capacities of co-habiting in the world together. In Thrift's words, the "heterogeneous associations" of bodies can bring together affect, motivation and skills in shaping meaningful (domestic) practices in space (1996: 24).

The more-than-human approach highlights the conceptual and material porosity of home at multiple scales beyond the physical house. Kaika (2004) identifies this porosity by recognising home as being open to social relations (such as gender, ethnicity and race) and natural processes and elements (such as dust, air and water). Home is seen to be performed as part of wider socio-natural reproduction, collapsing the binary logics of native and exotic, Indigenous and others, human and non-humans, male and female, private and public, country and city and so forth (see Gillon, 2014; Head and Muir, 2006; 2007). As specific examples, Wilkinson et al. (2014) show how the suburban home in Australia is permeated to streets and suburban parks at certain times of the day through the performative logics (and cultural desire) of bird watching. The psychological comfort achieved through the fleeting encounter with non-human nature as well as the availability of the 'interstitial' spaces of home is seen as critical to home's success. Power (2009a) uses the term 'liminal' to emphasise the surprising and unintended encounters and exchanges with wildlife (e.g. possums) in home's immediate surroundings that construct the more-than-human home by differentiating unhomely and homely spaces. The examples acknowledge home as socio-naturally open through intended and unintended transactions by producing spatio-temporal logics and meanings to home.

The works described above make a significant contribution to my understanding of the different attributes of home as I discussed above. I recognise three distinct shifts (summarised in Table 1.2) in approaching the more-than-human home.

- Firstly, nature/culture divides are reconfigured in the more-than-human home through entwined human social relations and non-human natural relations.

- Secondly, the pre-given identities, relations and power are reconfigured in more-than-human homes by recognising human-non-human collective capacities. New affective politics emerge based on the relational dynamics that exceed humanised attributes of class, identities and gender.
- Thirdly, home is performed rather than secured. Material and conceptual borders of home are constantly in the making through relations that often extend beyond concrete property relationships.

Table 1.2: Differences between human and more-than-human home

	Human home	More-than-human home
1.	• Nature/culture dualisms (e.g. human/non-human, subject/object, male/female)	• Nature/culture divides are unsettled, and home is performed as hybrid socio-natural processes (e.g. Kaika, 2004; Head and Muir, 2006; 2007)
2.	• Predefined identities, social relations and power (e.g. gender, class, race)	• Human attributes of social relations are reconfigured to more-than-human relations informing different politics and practice (e.g. Gin, 2014; Power, 2008; 2005; Shillington, 2008)
3.	• Concrete (and often pre-given) borders of home (e.g. determined by ownership documents)	• Material and conceptual borders are permeated through entangled human-non-human performances (e.g. van Holstein, 2016; Power, 2009a; Head and Muir, 2006)

Source; Author's summary

These alternate attributes of more-than-human home made known through human-non-human relations inform my approach of exploring home. The approach can articulate the 'less-represented' (Lorimer, 2005) and more affective aspects of domesticity as it enables attention to the multiple temporalities and materialities as co-

constituted through the human dweller's 'situated relations' (Gane, 2006: 147; see also Haraway, 2003: 5) with the non-human world.

There are, however, significant challenges to appreciating the dynamics of non-human agencies as often the dominant (humanist) discourses about cities and home are "undergirded by an ontological exceptionalism of humans" (Houston et al., 2017). Home is understood as a space for the human, constructed through mobilising human labour and expertise by capitalising, using, exploiting and transforming non-humans to meet human expectations. The most successful home from this perspective would manage to leave non-human nature outside. Nature can only be invited in after a significant level of 'abstraction' (e.g. water is chlorinated, timber is seasoned, etc.) (Kaika, 2004). Having a non-anthropocentric vantage point helps ground the thesis in more-than-human situated realities that allow an understanding of how spaces are lived in and made known beyond the anthropocentric parameters and the assumptions of dominant experts. Such situated relations are vital to the understanding of migrants' 'spatial chances' (Lancione, 2011)[34] and inform more liberatory outcomes to address migrants' comfortable adaptation to cities amidst multiple uncertainties.

Based on these insights, my PhD project focuses on the entangled non-human agencies of rural migrants as a 'vantage point' (Haraway, 1997: 269). In Haraway's term, it offers a 'non-standardised' perspective to explore the less familiar dimensions of home that contribute to the production of habitable spaces for migrants in cities.

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[34] I borrow the phrase of 'chances' from Lancione's (2011) research on homeless communities in the context of Turin. I find the phrase useful to refer to the precarious and uncertain journeys of my research participants in cities in search for home that is never pre-given.

Due to the precarious marginal existence of the communities on others' land with uncertain tenure, these homes are "highly fluid and contested sites… of entanglements of nature and culture, *elite and the marginal*, and of human and non-human agency" (Blunt, 2005: 512). These spaces are difficult sites of research as they are frequently either not properly attended to or if attended to, they are mostly understood through already constructed deprecating social imaginaries which lack appreciation of the many creativities and labour that are invested by marginal communities in the entangled more-than-human urban landscape. Moreover, many intended and unintended collaborations between human and non-human bodies influence the living conditions and capacities in migrant home and homemaking that go unexplored and unappreciated. The non-human agencies of plants, animals and other elements of fringe ecologies are positioned as central, with situated more-than-human relations shaping practice, meanings and physiologies of home. Re-imagining non-humans as co-constituting the home sheds light on the diverse strategies and experiences of migrant dwellers and their negotiation of the socio-ecological complexities of urban spaces. The approach also provides a means to reconsider the strengths and potential of marginal populations in ways that contest negative stereotypes perpetuated in much urban decision-making and policy discourse.

1.3 Research questions

Drawing on more-than-human approaches, this thesis adopts an ontological position that all temporalities and materialities are co-constituted through human and

other-than-human agencies.[35] I apply this ontological stance to explore how rural migrants negotiate home in the urban fringes of Khulna city in Bangladesh. In this way, it applies the insights gained from the more-than-human philosophies to understand aspects of migrants' home that remain largely unacknowledged and unappreciated when seen through a humanist lens. The research aims to inform the practice of planning with informal communities from a bottom-up perspective where people live in more-than-human cities. The broad research question is framed as:

> How can more-than-human concepts contribute to the understanding of home/homemaking and inform the practice of planning with migrant communities in the urban fringes of Khulna city?

With the aim of offering both conceptual and practical contributions, the thesis pursues the broad research question under three key empirical threads. These are: finding an appropriate method, understanding the more-than-human processes of home and homemaking and the implications of these more-than-human processes for informing practice. The first thread aims to develop an appropriate method that is based on the worldview that practices and places are co-constituted through more-than-human co-production; therefore, these methods also need to go beyond humanist approaches to adequately respond to more-than-human processes of homemaking. For this first thread, I devised a method that enabled the research participants to explore the more-than-human contexts in which they are situated. The second thread, better understanding of migrant home and homemaking, builds on three key themes that have

[35] See also Bawaka Country et al., (2015).

emerged through the analysis of data: how human-nature relations[36] shape politics of home; how human-nature relations inform homemaking practices; and finally, how the relations build long-term competencies of home beyond a material shelter. The third and final thread poses an additional practical question regarding the opportunities of more-than-human processes for informing policy and practice that can benefit marginalised groups. It asks how these alternate knowledges matter for more inclusive planning practice in more-than-human cities. The empirical threads are not isolated but overlap and are interlinked. As such there are five research questions beneath the broader aim:

Finding a method -

1) What is an appropriate method to explore home/homemaking informed by more-than-human concepts?

Understanding home and homemaking -

2) What are the politics of home informed by more-than-human relations?
3) What are the imaginary and material dimensions of home informed by more-than-human relations?
4) What are the competencies of homemaking informed by more-than-human relations?

[36] I have used human-nature relations and more-than-human relations synonymously in this thesis. In both cases, the relations denote human and nature are not isolated entities or external to each other, but they denote the fluid relationships (see for example Power, 2005). Also see Whatmore (2013) for details on the use of 'hyphens' in the phrase of more-than-human to denote the fluidity between human and its excesses.

Informing practice -

5) What are the contributions of the migrant spatiality in rethinking alternate forms of urban planning from below?

1.4 The thesis: migrant homes in more-than-human cities

The thesis is organised to answer the research questions over eight chapters including the present one as chapter 1, outlining the thesis. There have been a number of overlaps due to the nature of submitting a thesis by publication, however, these repetitions have been minimised as far as is possible. **Chapter 1** describes the reasons behind undertaking this research on peasant-turned-migrant homemaking in the context of Khulna. The overarching conceptual lineage of more-than-human home and homemaking and its usefulness in explaining rural migrants' homes are touched upon following the formulation of research questions that are based on more-than-human concepts. The final sub-sections discuss the structure and significance of the thesis. The empirical chapters that follow are five stand-alone papers (one published, one accepted, two under review and one the abstract accepted for inclusion in a special edition) are spread over three key threads: finding a method; understanding home and homemaking and informing practice. These papers explain different dimensions of the framework and the research questions outlined in section 1.3 of chapter 1. Each paper includes an independent literature review and methods that connect with specific themes and issues discussed under each of the sub-research questions.

Chapter 2 engages with methodological discussion. The first section introduces more-than-human methodological interpretation followed by the second section

discussing the selection of research sites in the urban fringes of Khulna city in Bangladesh and explains why the area suited the purposes of the research. The second section also discusses the criteria used for selection of sites of migrant homes and the choices that directed the recruitment of participants. The third section recounts different verbal, non-verbal and performative methods, such as participatory photography, walking interviews, key informant interviews and group discussions used to explore migrants' more-than-human homes. The final section describes my human and more-than-human positionality in approaching this thesis.

Chapter 3 presents the first paper which has since been published. It covers part of the first thread, *finding a method*, and highlights the fact that while theoretical thinking in more-than-human themes has been well developed, methodological thinking and devising of methods to pursue these concepts lags behind. With the aim of going beyond the humanist methods of 'talks and texts' to 'do more' (Dowling et al., 2016), the chapter borrows insights from feminist geographers' articulation of 'response' to explore how participatory photography can be used to examine more-than-human processes. The chapter outlines the method referred to as 'photo-response' that focuses on the performances of seeing, telling and being together to enhance the co-production of knowledge. To illustrate how photo-response was applied and the types of insights gained, the chapter analyses one participant family's articulation of three moments of response. The analysis provides new insights for conducting research in, with and as more-than-human worlds.

Chapter 4, the first chapter on the second thread, *understanding home/homemaking*, moves beyond the anthropocentric focus of much research into the politics of homemaking that we criticise as anthropolitics. The chapter develops the

alternate ontological stance that non-humans have vital communicative agencies that produce more affective political processes – what the chapter refers to as more-than-human politics. Three dominant more-than-human political strategies are found, namely, complying, transgressing and reimagining that enable migrants to maintain relationships to access absentee patrons' land, negotiate practices beyond the land, and reimagine a sense of belonging to the fringe ecologies. These are emancipatory and alternate political processes through which marginal communities negotiate home without formal rights of access to urban land. These more-than-human politics help reconceptualise the uneven production of urban spaces in ways that go beyond humanistic attributes of gender, class, race and ethnicity, and raise hope for multi-species urban living in more-than-human cities.

Chapter 5 again highlights more-than-human relations as central to understanding home: that all temporalities and materialities are co-constituted through humans' situated relations with non-humans. The chapter conceptualises the relations as more-than-human imaginaries that bring together human-non-human bodies and contribute to the conditions and capacities of homemaking. Three dominant imaginaries, aesthetic, spiritual and economic, are found to guide migrants' homemaking practices leading to the material dimensions of migrant home-ecologies that connect both domestic and non-domestic spaces through the embodied flow of more-than-human relations. The chapter highlights how the reimagining of non-humans as co-constituting home opens up the diverse strategies and experiences of marginalised communities and the socio-ecological complexities of urban space. This can be helpful in reconceptualising the broader urban metabolic processes of cities in diverse places.

Chapter 6 develops the concept of unbounding to highlight more affective nuances of homemaking and its wider social reproduction beyond the home and across the scale of the body and the city. Highlighting women's mobility outside home, the article explains how migrant household heads negotiate economic opportunities across the neighbourhood. Non-human agencies, such as animals, plants, animal excreta, trash and weeds in the urban ecologies create the conditions of livelihoods for which various cultural prejudices and established gendered identities need to be compromised. This enables women to work outside the physical home, create mutual relationships with neighbouring women and gather resources. Unbounding helps uncover the critical competency of migrant homemaking within the broader socio-ecologies that may offer opportunities for housing the homeless in cities.

C**hapter 7** informs the final thread, *informing practice*. It presents the last manuscript, which endeavours to reimagine migrant spatiality as the outcome of more-than-human 'care relations', enabling a more radical and participatory form of planning. Feminist, post-human and non-western scholarship inspires the conceptualisation of care/caring as a process of world making and planning as a practice of care. Caring recasts the landless (and homeless) migrants within an assemblage of other actors, such as absentee landowners, neighbouring elites, other migrant women and NGOs as well as non-human agencies of urban land. In the absence of support from formal planning agents, these communities initiate their own spaces to cultivate resilience, build social capital and foster communality. The chapter concludes by proposing 'care-full' planning that takes: firstly, a fuller account of community comprised of both human and non-human agencies; secondly, their place-specific relational dynamics that inform planning agendas: and finally, planning through participatory experimentation. Caring

shows promise for an ontological turn in planning whereby cities can be seen as inclusive more-than-human spaces of care that include under-represented marginal communities.

Chapter 8 concludes the thesis. Here I summarise the key findings of the thesis and reflect on what the thesis has contributed to the existing scholarship of homemaking and more-than-human concepts. I refer back to the three key threads to organise the implications of the research in areas of more-than-human research, in understanding home, and informing practice. I discuss how the research has expanded knowledge in areas of doing more-than-human methods, and the politics of home, home and work, home and gender, and homemaking beyond home. While pointing to some specificities and partialities in the thesis, I also propose some future trajectories for extending my research.

1.5 Significance

The PhD thesis is significant on several levels – methodologically, empirically, theoretically and in practice.

Methodologically, the fieldwork seeks to develop new ways of conducting more-than-human research to generate alternate yet relevant knowledge about places and practices through the collaboration of human and non-human agencies. The photo-response method can be useful for exploring more-than-human place specific knowledge in other settings. The research may help further the value of more-than-human ontology with a more action-oriented outcome, and eliminate anachronistic criticisms in which more-than-human philosophies are discounted as 'too relational'

(Philo, 2005: 824) to have any convincing method of inquiry (Duncan and Duncan, 2004). Another criticism regarding a lack of "ethnographic attention in the social life of things" (Instone, 2004) is hopefully addressed by going beyond the overtly researched human-animal relationships, as my fieldwork widens the engagement by including the agencies of animal excreta, weed, trash, plants and water. In these ways, it has been an opportunity to test the more-than-human methods in non-conforming and informal homes to understand the concept's wider implications.

Empirically, the thesis is significant in informing how landless rural migrants negotiate home outside slums. The findings are valuable for discerning the apparently invisible rural migrants' rationales of locational choices, their struggles and everyday spatial practices in coastal cities that are likely to experience an overwhelming influx of climate migrants. With a more-than-human focus, the research also highlights the marginal spaces beyond their 'unplannable' and 'unmappable' status (Roy, 2005: 147). By understanding migrants' politics, cultural meanings and practices, attachments and capacities to negotiate home in a city, the PhD thesis also seeks to highlight the inappropriateness of the Euro-American expert-led planning of the city disfavoring ordinary communities and their urban spaces; instead, how the communities outside the expert (and anthropocentric) categories can potentially inform inclusive cities.[37]

Theoretically, the significance is twofold. Firstly, despite the burgeoning scholarship of more-than-human home, research on the home's more-than-human relations in marginal settings is minimal, despite exceptions like Shillington (2008). To

[37] See Robinson (2006) for the role of modernity and development disapproving ordinary cities and communities.

date, human-nature domestic relations have been examined in western contexts where homes are bounded within formal planning controls and legal entitlement (Head and Muir, 2006; 2007; Power, 2005; Gillon, 2014; Bhatti and Church, 2001; Hitchings, 2003). In these 'modern home'(s), nature is often encountered following some level of abstraction, such as pest control or water filtration (Kaika, 2004). In contrast, the migrant homes explored in this PhD are informally negotiated; they suffer a high degree of uncertainty and organisational ambivalence. The homes are dwelt in through migrants' creative engagements with the surrounding nature and deal with the many scarcities exacerbated by lack of formal rights and tenure. This new knowledge on more-than-human homes from the non-West may make a critical difference in disentangling the popular (and often negative) perceptions of landlessness, pro-poor homemaking or informality; the differences may "script the homes in less familiar but in no less real ways" (Dewsbury, 2003).

Secondly, the more-than-human exploration of home in this thesis builds upon earlier feminist and critical geographical scholarship that recognises the complex, paradoxical, gendered, multi-scalar and performative dimensions of home and homemaking. Home in material cultural studies is broadly understood through the contribution of different human actors and objects of material culture creating affects of home, and how the lack of access to a particular object or the absence of any actor creates the precarious condition of homelessness (e.g. Miller, 2001; Young, 2004; Blunt, 2005; Lane and Gorman-Murray, 2011). I take a different approach by setting non-human agencies as intimate vantage points and highlight their contribution in shaping politics and practices of homemaking. The thesis decenters the latent anthropocentrism in imagining home as human space only; therefore, the non-

anthropocentric imagination and materiality of domestic spaces are revealed through more-than-human relations. The conceptual and material porosity of homes are made more explicit through homemakers' connection with plants, animals and other non-human agencies outside the physical home. Thus the thesis reinforces the earlier critical geographical theorisation of the home as multi-sited and performative; the home exists across the scale of the body, the household, the city and beyond [see Blunt and Dowling (2006) for the critical geographic interpretation of the multi-scalar home]. Through the focus on ongoing relations and circumstances created by migrants and their entanglements with non-humans, the thesis highlights under-explored nuances of making homes that are often inadequately understood in other research traditions.

In practice, the thesis aims to inform planning and policies for working with informal communities. These relatively disempowered groups often find it difficult to reclaim their rights in cities. More-than-human ontology provides a means for rethinking planning about these marginal spaces from the bottom-up by utilising a communities' own spatial tactics and rationales. Thus, the discourse of planning can move beyond conventional human-centrism and prevailing divisions between 'expert' and 'lay' knowledge (Hinchliffe and Whatmore, 2006). The thesis seeks to offer different competencies for spatial planners to engage with humans and non-human denizens as multiple publics with their heterogeneous spatial, environmental and other concerns. The PhD indicates alternative strategies for urban planning by rethinking

these marginal lives as spaces of 'hope' (Harvey, 2000) rather than being limited by their 'state of exceptions' (Agamben, 2005).[38]

[38] I consider Agamben's (2005) depiction of 'exceptionalism' relevant to depict the hegemonic human and expert status quo to non-represented others.

Chapter 2: Designing the research

2. 1 Introduction

To develop a more-than-human approach this chapter is divided into four sections. In the first part of the chapter, I discuss how more-than-human philosophies have encouraged me to 'slow down' as an expert and to set a new 'vantage point' focused on the heterogeneous 'goings on' of migrant homes. In the second section, I situate the research in the urban fringes of Khulna city and explain why this area suited the purposes of my more-than-human research approach. I also discuss the criteria I used to identify migrant homes and the choices that directed the recruitment of participants. In the third section, I recount the specific methods used to maintain my vantage point and the 'inductive' (Creswell, 2012: 18, 38) ways I handled, analysed and (re)interpreted the data to inform my research questions. In the final section, I conclude with an explanation of my human and more-than-human positionalities in the research process.

2.2 Setting the 'vantage point'

The key empirical goal of this thesis is to explore rural migrants' homes and homemaking practices on the fringes of Khulna city, outside established slums. The prevailing imaginaries produced by urban institutions about these marginal communities are constructed through humanist and expert discourses, but are blurred and insufficient as they sit outside legal ownership and formal definitions of (private)

property. As a consequence, migrant struggles (and sometimes their existence) are rendered invisible in cities like Khulna. In response, I have taken a more-than-human approach to home in which temporalities and materialities are seen as co-constructed through the interplay of human and non-human agencies.[1] In this understanding, homes and homemaking are comprised of diverse human and non-human agencies, constituting home as a hybrid assemblage. Home is imagined and materialised through cohabiting, confronting, accommodating, and often abstracting heterogeneous assemblages. These assemblages come together both inside the home and outside it.[2] It is quite a challenge to explore such assemblages, requiring unconventional experiments and sensitivities. I discuss below the more-than-human approach that informs this research.

2.2.1 Methodology: the more-than-human 'turn'

As discussed in section 1.2.1, this thesis has been influenced by the more-than-human 'turn' in feminist and post-human geographies that propose a shift in rethinking human subjectivity. The approach rather humbly invites greater recognition of the non-human agencies that surround and are entangled with human social life (Whatmore, 2013a). The entanglements point to a different type of 'fabric-ation', not as the mere "retro-production of human labour onto an object but a sturdier (stronger), much more reflexive co-production of places richly invested within a collective [more-than-human]

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[1] See the discussion on the different threads of more-than-human domesticity summarised in Dowling and Power (2013).
[2] For example, Wilkinson et al. (2014) describes human encounters with birds that involve relational processes that fashion distant places as home. See also Power (2009a) for discussion of human-non-human encounters at the immediate borders of home that create homey feelings.

practice" (Latour 1999a:274 in Whatmore 2002: 3). With this acknowledgment, and without being prescriptive, here I develop a methodology that explores ways of being 'affected' (Latour, 2004: 205, see also Hincliffe, 2003: 207). The approach focuses upon the heterogeneous 'goings on', the human-non-human conditions and 'contact zones' (Haraway, 2008: 4)[3] of a place, in this case, rural migrants' homes at the fringes of Khulna city. In Stenger's terms, I needed to find ways,

> … to succeed in `working together' . . . where phenomena continue … to speak in many voices; where they refuse to be reinvented as univocal witnesses. (Stengers, 1997a: 90)

Recognising the democratic call in the more-than-human 'turn', I looked for a methodology that offers modes of inquiry through which every-'body', both human and non-human, can co-produce vignettes that inform migrant homes and homemaking practices. To become a receiver of such pluralistic and more-than-human realities required a shift in my conception of research. The quote below was useful,

> Realities are enacted, rather than pre-given, therefore not fixed or singular (and so *knowledge* politics is not simply about epistemology, or the best view on a single reality)… there can be debates and struggles over which realities to enact and that these struggles will involve assemblages of human and nonhumans. [Knowledge] Politics [in

[3] By depicting the term, 'contact zone', Haraway (2008: 4) emphasises the role of 'figure', the body and corporeal relationships between human and non-human by opposing didactic or disembodied framings.

> fieldwork], in this sense, becomes a more-than-human affair. (Hinchliffe and Whatmore, 2006: 124)

With the acknowledgement of multiple (and more-than-human) realities, my approach does not necessarily opt for discovering something unknown; rather it calls for a different light to be shed on the human-non-human entangled relationships and the causes and effects of that particular assemblage. The approach demands more experiential and embodied points of view to explore the contextual configurations of the human-non-human contact zones that would otherwise go unnoticed (if not already hidden by dominant rationalities and metaphors). The focus is to bring the more-than-human relations into visibility, which, following interpretations proposed by Whatmore (2003: 68), means the methodology might simply ask how we make sense of the 'goings on' that constitute migrants' homes in Khulna's urban fringes and the heterogeneous human-nature relations the homes embody within and beyond. By better appreciating the role of a variety of entities in these 'goings on' an alternative way to conduct and interpret 'home' can be achieved.

Delving into the world of 'goings on' may be considered a move away from the conventional style of research that attempts to reach a "judgment *relying on* what counts as valid knowledge" (Clark 2003: 37). In contrast, research in more-than-human approach demands 'engagement' rather than 'theoretical speculation' (Massey, 2003: 73). The approach calls for more embodied encounters and confrontation with the empirical world through openness to a 'thousand little things' and their many relations – all of which may constitute the 'data' about home (ibid). According to Whatmore,

> all manner of entities, non-human as well as human, assembled in the event of research affect its conduct, exceed their mobilisation as compliant data and complicate taken-for-granted distinctions between social subjects and material objects reproduced through scientific divisions of labour. (2003: 91)

It is a call for approaching the research setting with a sense of 'provisionality' (Pryke et al., 2003: 68). Many 'strange and unpredictable connections' (Clark, 2003: 39) may be encountered as data. According to Stengers (1997b), data is rather generated through taking account of the existing relations, by 'taking risks' through relinquishing the researcher's control and subjectivity and allowing the more-than-human 'goings on' to be mapped into knowledge (Stengers, 1997b: 117).

The more-than-human 'turn' has been thoroughly debated and engaged within theory, however, there are gaps in understanding how to apply insights in practice (Dowling et al., 2016b; Lorimer, 2010). Consequently, both methodology and methods lag behind. Further, there are significant challenges involved in encountering the non-human others, who neither have a voice nor are acknowledged as participants in our social or urban world. To tackle this problem of non-representation (Lorimer, 2005), more-than-human approach seeks to "do more" to create "spaces for new voices" (Dowling et al, 2016b), to "supplement the familiar… humanist methods that rely on generating talk and text" (Whatmore, 2006: 607) of human participants only. There is a need to set some viable methods that are able to "appropriately apprehend and render entanglements of nature, culture, human, and more-than-human actants" (Dowling et al., 2017) that construct migrant homes in Khulna's fringes.

In approaching my research with the above insights and suggestions, I attempted to identify migrant homes that were clearly enveloped in non-human 'goings on'. I sought to identify human participants who are entangled within local more-than-human 'contact zones' and homely ecologies. In the following section, I describe how I situated the research in the migrant homes of Khulna's fringes and the recruitment of human participants. I then discuss the selection of specific methods that equipped my human participants to 'trouble' the pre-existing (and often pervasive) anthropocentric knowledge that frequently overshadows entangled more-than-human existences.

2.3 Situating the research

In the following sub-sections, I discuss the research site in the south-western fringes of Khulna city, the migrant homes in which the research took place, and the human research participants who contributed to this thesis through sharing details about their more-than-human homes.

2.3.1 Locating the south-western fringes of Khulna city

The thesis fieldwork commenced during 2014 and 2015 in the fringes of Khulna city. As the third largest city in Bangladesh and an administrative seat for the Khulna District and Khulna Division, Khulna city has always been an attractive regional hub for rural migrants from the coast (Figure 1.1). Khulna's distinct geographical advantages contributed to its development as a regional hub. The city was established as a small trading post for wood, fish, honey and salt, taking advantage of the river-

based trade route to the Sundarbans.[4] From as early as 1833, it was closely linked to Kolkata, the capital of British East India during 1772-1911.[5] Later it became a raw material supplier of the colony when the British East India Company set up an indigo factory on the riverbank in the 1830s. By 1947, Khulna was well established as the major jute trading post for Kolkata.[6] Following the colonial period, Khulna was strategically further developed as an industrial city under the Pakistani administration, and from 1971 under Bangladeshi government. Khulna is the closest major city to the Mongla Port, the second largest seaport in the country.[7] Khulna's proximity to Mongla influenced the flourishing of private and state owned heavy industries, such as jute mills, paper mills, the hardboard mills and the shipyard. Later, in the 1990s, despite the down-turn in the state-run heavy industries due to national level policy failures, Khulna still retained its status as an industrial city as in the past 20 years many shrimp and fish processing industries have flourished along the Rupsha riverbank.[8]

At present, Khulna city is the 37th fastest growing city in the world (Citymayors, 2018) with a population of about one million within its metropolitan area. Compared to the global standard the city has a high population density of 16,268 persons per sq. km (BBS, 2013: 18-19).[9] Due to the industrial economy, including a linked service sector,

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[4] The Sundarbans mangrove forest, one of the largest such forests in the world, is also an UNESCO natural heritage site.
[5] See the history of Khulna in Mitra, (1914/2000).
[6] See Hakim (2013a: 103-125) for the urbanisation history of Khulna city.
[7] It is just 50 km further south and handles 25% of the national trade (CDIA, 2009).
[8] See Debnath et al. (2015) for the historical development of Khulna's shrimp sector since the 1980s.
[9] There are some variations in the population data across sources. According to the city population data, in 2011, 0.66 million lived in its urban area of 50.6 sq. km. However, Khulna city is fast expanding to its fringes where basic urban services have not yet been extended. Taking account of these extended areas, Khulna city has a population of 1.04 million living in an area of 267 sq. km. (Citypopulation, 2018).

the city has long attracted migrants from the hinterland areas.[10] From the 1950s onwards the population flow significantly accelerated due to strong economic growth, continuing in the decades following the liberation war in 1971.[11] On average, 42-44% of the present populations of Khulna city are regional migrants.[12] Alarmingly, Khulna has the third highest concentration of officially defined 'poor' populations within urban centres in the country (BBS, 2015: 32-34). These populations comprise one-fifth of the city's population (approximately 190,000 people) (Ashiq-Ur-Rahman, 2012: 127). Although the majority of economically disadvantaged people, mostly migrants from villages, live in 1134 slums within Khulna City Corporation (KCC) (BBS, 2015: 35), there are marginalised populations who live in other urban areas, such as in the urban fringes of Khulna, outside of the jurisdiction of the KCC[13] (See for KCC area in Figure 2.1). It is these fringe dwellers that form the focus of my thesis.[14]

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[10] As stated by Miah (2002), migrant spaces in the form of 'informal' villages (suburbs) adjacent to the 'official' city are "essential for Khulna's economy, these villages housed the service people for the colonial masters and the wage labourers for river-based trading" (Hakim, 2013a: 109).
[11] Shamsad and Shamsad (2004).
[12] See Table 2.5 on lifetime net migration 1961-1998 in KDA (2014); they come from other places, "mostly from rural areas" of "Bagerhat, Satkhira and Gopalganj and as far as from Barishal district" (Section 2.3).
[13] Khulna City Corporation (KCC) provides basic urban services within the metropolitan area.
[14] There is a shortage of accurate data on landless rural migrants living in Khulna's urban fringes. Often they are informally located on public and private lands and remain mobile. Many are voters in their original locations and therefore these communities are not properly reflected in government statistics. Further, reports documenting census figures of slum areas and floating populations focus on well-recognised slums. These define 'floating populations' as those who "are found on the census night during 00.00-06.00 AM of the 25th April, 2014 on the streets, rail station, launch *ghat*, bus station, hat-bazar, *mazar*, stair case of public/government buildings, open spaces etc." (BBS, 2015: 6). My study participants live in none of these spaces.

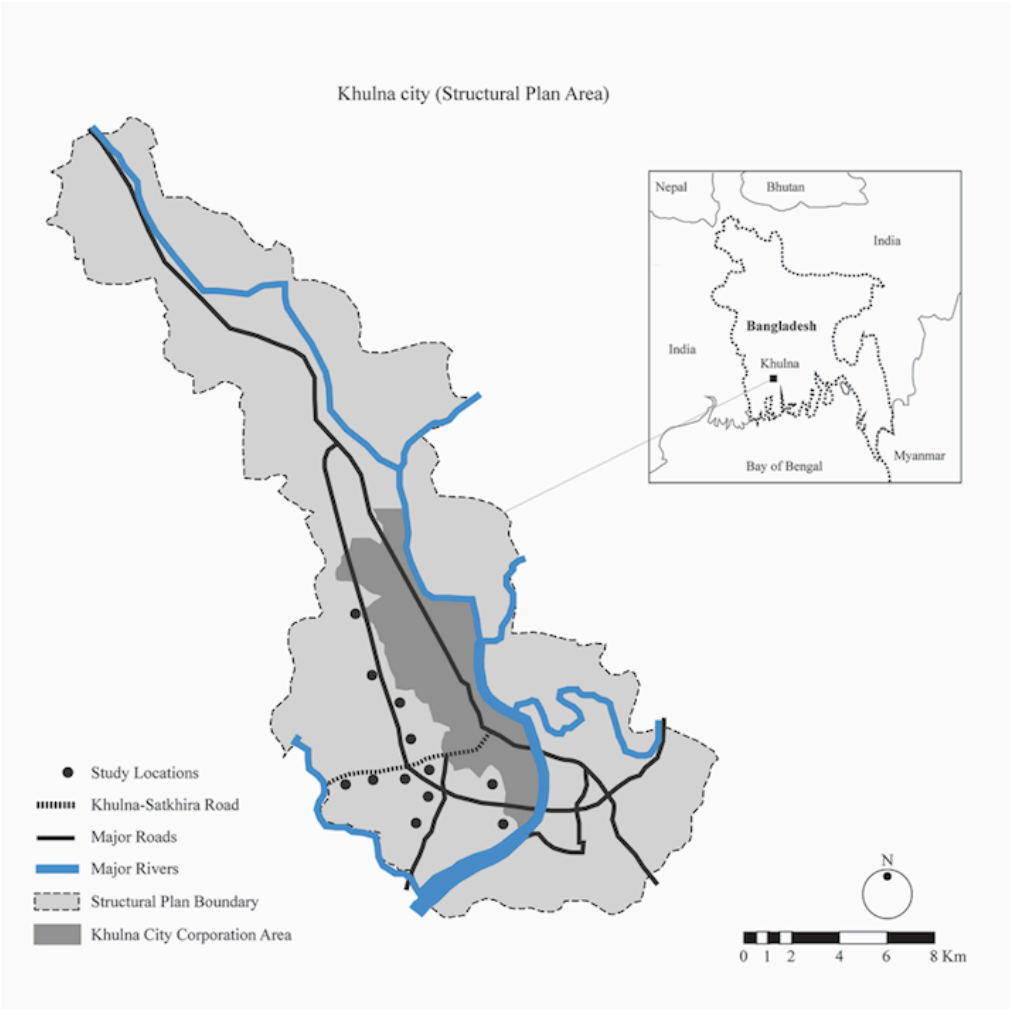

Figure 2.1: The structural plan boundary of Khulna city.
Source: Author, adapted from various sources

The influx of migrants, along with recent economic and regional infrastructure developments,[15] is driving rapid expansion of the city to its fringes. The current Khulna Master Plan (KMP 2001) covers an area of 451.18 sq. km including an expansive fringe area of 181.16 sq. km (KDA, 2014).[16] The fringe areas, previously perceived as rural,

[15] The major regional infrastructure project, the bridge on the river Padma connecting Khulna city and the capital city of Dhaka, is in progress. A new Export Processing Zone (EPZ) in Mongla, just within the stretch of Khulna city has begun to attract regional investments.
[16] See the structural plan boundary in Figure 2.2.

have been included within the city under the KMP 2001 (KDA, 2002). These are 'urbanising areas' with "basically rural and agricultural land" with an annual 2.95% conversion rate since 1998, indicating that farmland is gradually being converted into non-farm land use (KDA, 2014). In particular, the south-western fringe landscapes, where my research took place, are prone to rapid urban transformation along newly developed regional infrastructure lines (Rekittke, 2009). It is evident that the historical pattern of urban spatial expansion along the river has changed its axis by following land-based infrastructure lines (see Figure 2.2). The trend of urban expansion is supported by the newly drafted Detail Area Development Plan (DADP) 2014 (KDA, 2014), the key government document to implement KMP 2001, suggesting that Khulna city is fast expanding towards the south and the west along the Khulna-Satkhira inter-district highway and the newly-built city bypass highway. As stated in DADP,

> the trend is to grow towards south and west around the City Bypass… Influence of Khulna University and the City Bypass is serving as the prime driving forces for growth towards south and west. Another reason is that these areas have good connectivity with the prime activity areas of the main city … almost all agricultural land within the city periphery have already been sold out … The buyers are now waiting for the right moment to start development, significant part of which is likely go to residential use. (KDA, 2014: Chapter 2.2)

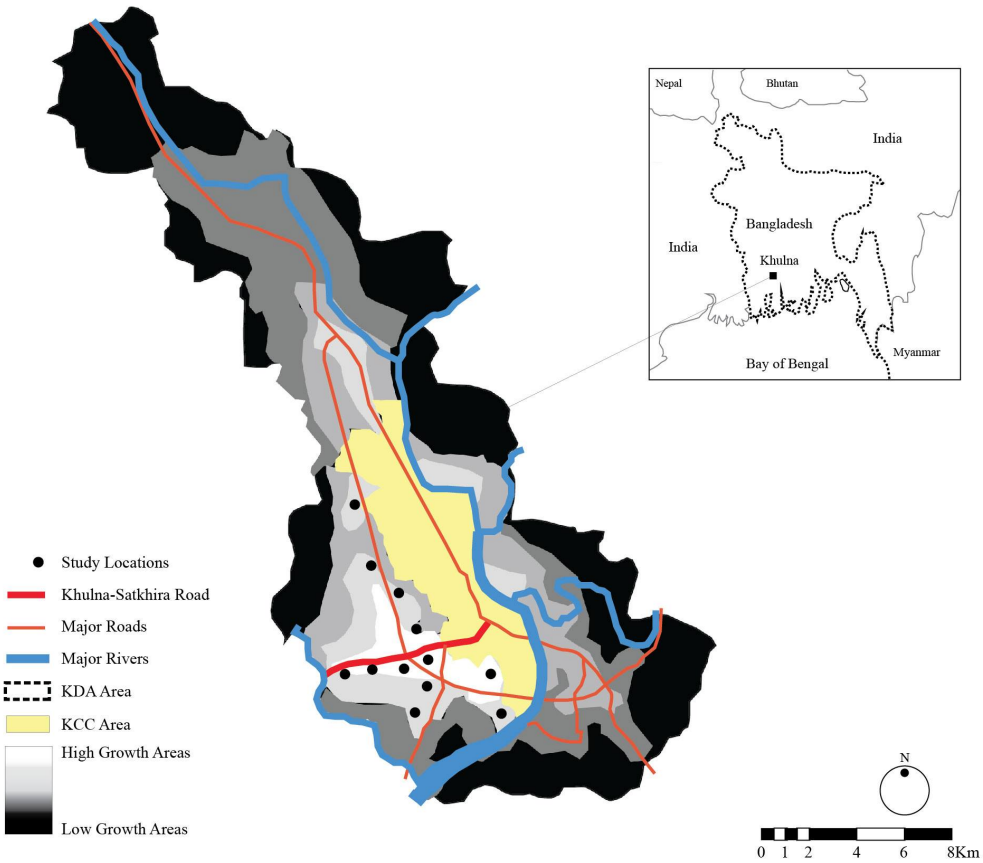

Figure 2.2: Study locations in high urban growth areas
Source: Redrawn from Salauddin et al. (2009)

These fringe areas of Khulna city sit within interesting (and ambiguous) institutional settings. In general, Khulna city is managed by multiple overlapping local governance offices that often take a market-based approach and only provide services to those who are formally enrolled as clients (and citizens) of Khulna city. KDA and KCC are the two primary agencies serving Khulna city. The Khulna Water Supply and Sewerage Authority (KWASA) was established in 2008. Prior to this, urban water supply was the responsibility of KCC (Gomes and Hermans, 2017). KWASA is in its early stage of establishment, and yet to expand its infrastructure and services for

reaching Khulna's majority citizens. KDA is primarily responsible for urban planning and development controls which rarely extend to the fringes that are yet to be fully amalgamated within the city. The ongoing extension of Khulna city to its surrounding non-urban landscape was approved in the Khulna Master Plan 2001 (KDA 2002). In 2014-2015, during the fieldwork, KDA was developing the Detailed Area Development Plan 2014 (DADP 2014) under KMP 2001 for Khulna's expansion to its fringes. The drafting of DADP 2014 was completed in 2016, but is yet to be gazetted. Currently some planning decisions are made with regard to this plan. Unfortunately, DADP 2014 barely acknowledges the existence of landless climate migrants in Khulna's urbanizing fringes. Consequently, this gap in the policy document perpetuates the lack of planning decisions needed to address issues surrounding migrants and their adaptation in the city fringes.

Since the 1980s, KDA has often initiated site and service schemes to access urban land that are popular among elite urban communities. KDA's ignorance of the urban poor has been documented in Roy et al. (2012). Banks et al. (2011: 491) further argue that in the Khulna context, institutions approach the urban poor with the intention of 'removal' rather than 'assistance'.

In contrast, the KCC mainly provides essential urban services to legal taxpaying agents and to some major slums "via clienteles networks and vote bank politics" (Parvin et al., 2016:88). However, the KCC "does not support any other squatter settlements outside slums" (Sowgat, 2012: 134). In this way, these state-led semi-autonomous bodies in the local planning context of Khulna 'stay away' from many economically marginal communities, such as the landless rural migrants who take refuge in Khulna's

non-slum settlements.[17] These migrant communities, as explained by Gurstein and Vilches (2010: 433), having failed to enroll in the neoliberal city elsewhere, are forced to inhabit a 'residual city' that operates outside the official one, labouring and living in hidden and sometimes illegal spaces.

The choice to make homes in the south-western fringes of the city follows the migration pathways of displaced villagers from coastal areas. Over the last four decades climate change-induced rural-urban mobility has been constant (Ahsan et al., 2011). The south-western fringes are the gateway areas by which migrants enter Khulna city. The coast of Bangladesh is an area of severe human suffering due to floods, cyclones and storm surges that destroy economic assets such as housing, land and crops of coastal peasants. For example, according to a government study, in 2007, 32,000 square kilometers of land were inundated, affecting three million households and partially and fully damaging 1.12 million hectares (ha) of agricultural land (GOB, 2007). Roy et al. (2009) document how, during three months following the Category 1 Cyclone Aila in 2009, 88,000 people left their villages. The leading newspaper in Khulna city, the *Daily Purbanchal* (2009), reported that the number was as high as 125,000. In the aftermath of a disaster, the capital city of Dhaka is often the first destination choice for migrants, but the decision to travel to Dhaka is sometimes difficult as many migrants lack the resources necessary to travel such a distance. Often migrants follow the footprints of others and rely on some acquaintances at their destination. Under these circumstances, regional urban centres like Khulna are increasingly being seen as the preferred destination for displaced villagers from the south-west coast. A study in the context of

[17] See pro-poorness of Khulna's planning in Sowgat et al. (2016: 12-13).

Cyclone Aila by Mallick and Vogt (2015) suggests that 78% of 'displaced family members' moved to nearby big cities, among which Khulna is the most sought after relocation destination.

The urban fringes of Khulna city are interesting sites, with both rural and urban attributes, attracting displaced coastal villagers. Contrary to the high population density in the urban core (e.g. 23,751 persons/per sq. km in Khulna Sadar)[18], there are places in the fringes with a density as low as only 673 persons per sq. km (Citypopulation, 2018). Agricultural land use comprises approximately 36.6% of the land use on the urban fringes, however its future is uncertain (See Figure 2.3) (KDA, 2014). Due to the rapid urban expansion of these south-western fringes land prices have escalated, from 40% to 900% in a decade (KDA, 2014: section 2.13). As a result, agricultural lands have undergone massive speculation where absent urban elites invest in land.[19] It is mostly urban elites who own the land in these fringes and wait for the right time to sell the land or change the land use. In the meantime, agricultural activities continue through small to large-scale private investments in rice plantations, shrimp and sweet water fish farming, shrimp hatcheries and poultry. These rural attributes attract villagers from coastal areas, many of whom possess agricultural skills and have been displaced by the rise in sea level.

These rural migrants take refuge on these lands through informal negotiations with absentee owners. They guarantee to 'take care' of the urban elites' land and land-

[18] Post code – 9100.
[19] See Alam et al. (2016) to see the detail transformation of two locations in these south-western fringes. In the selected study locations, the ownership of 62-70% of the land changed. Most of the new landowners, in their study areas are identified as outsiders, the affluent communities in the city.

based products by utilising their farming knowledge and skill in exchange for a portion of land to be used as shelter. They shift across locations based on the availability of vacant land and the informal consent of absentee owners. In this way, these rural migrants remain a relatively under-detected group within climate migration policy and research. My thesis seeks to rectify this gap in knowledge by focusing explicitly on migrants in the fringe areas. The following section explains the selection processes used to invite participants into the research.

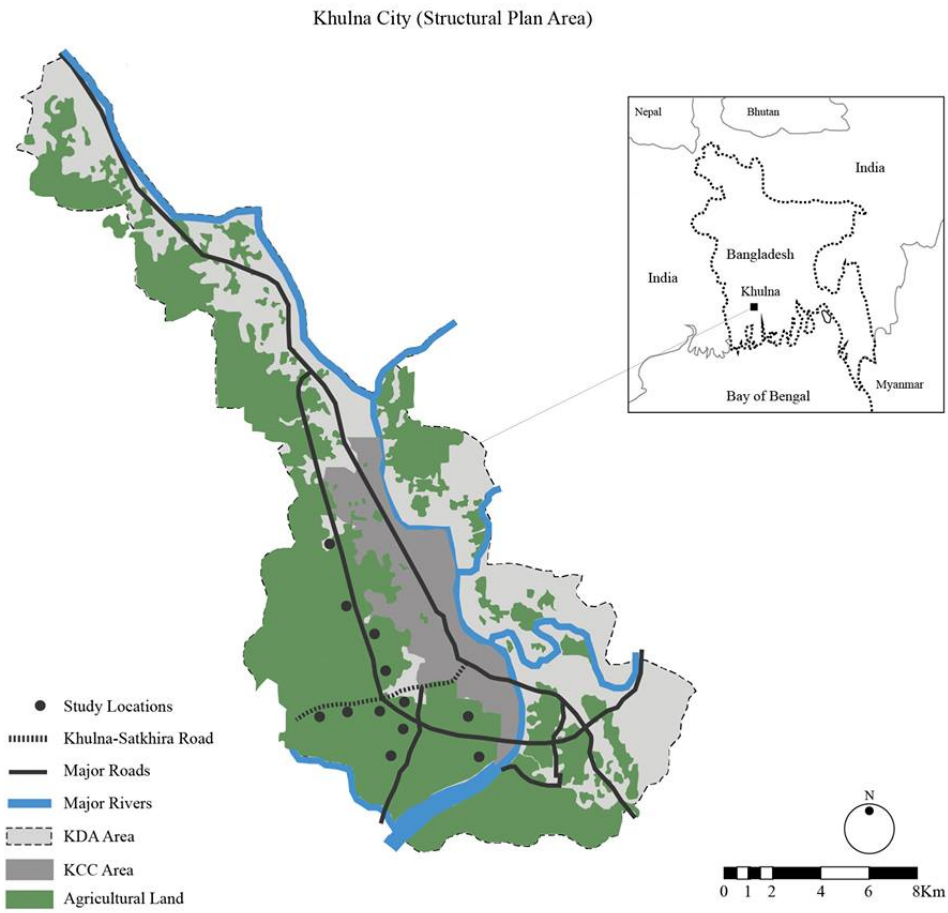

Figure 2.3: Proportion of agricultural land in south-western fringes
Source: Redrawn from KDA (2014)

2.3.2 Identifying study homes

To identify participant households I undertook a reconnaissance survey along major infrastructure lines, such as the new Khulna city bypass road, the Khulna-Satkhira road, the Rupsha Bridge highway and the Khulna-Batiaghata road (Figure 2.1). Initially, the first few families were accessed through two community 'gatekeepers'[20] in order to gain the confidence of participant families, as I was a complete stranger to them.[21] Later I explored homes through 'snowballing' or building on the information shared at successive homes.[22] In addition, I also remained open and opportunistic in following new leads, taking advantage of unexpected incidents and information when I approached successive homes. I spent about a month locating families until an adequate number and range of participants had been reached based on the considerations described below. All of the identified homes are spread within a six kilometre wide buffer zone in the south-western fringes of Khulna city (see Figure 2.1).

I had set some key considerations to guide the reconnaissance, such as, that the dwellings lay outside slums, the length of time participants had lived in the fringes, and family structure. First, as the thesis is focused on migrant homes outside established

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[20] See Hammersley and Atkinson (1995).
[21] The first gatekeeper, a local community member who has been living in these fringes for the past two decades, is regarded as an 'insider' to the participant populations. I had prior acquaintance with this person, as he had been a plumber on construction sites where I had served as an architect. The second person is the manager from an NGO who had also been working with landless migrants in these fringes for the past two decades. I met him in the first week of fieldwork during initial visits to the fringes.
[22] In qualitative enquiries, the snowball or chain sampling technique is used to identify cases of interest through people who know other people, who again know what cases are information-rich (Miles and Huberman, 1994: 28).

slums, I sought homes that did not fit the typical characteristics of urban slums.[23] I deliberately looked for isolated homes rather than those clusters that gave the sense of a slum. I also carefully observed the condition of basic services (e.g. water and energy supply).[24] The negotiation of services often give these settlements a sense of permanence and communality and the homes gain some degree of recognition by formal planning agents. Overall, I avoided homes that corresponded to formal tenure systems and had the characteristics of a typical slum.

The length of time a family had dwelt in Khulna's urban fringes was the second major consideration in my selection of study homes. More recent migrants were excluded as they had not yet secured homes or developed strong relations in place. After about a week into the reconnaissance survey, I found a pattern of migration among the families I had approached: their migration decisions were linked to major natural disaster events such as tropical cyclone and flood that had occurred over the last 30 years.[25] Most could be considered climate migrants, however migration had not always

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[23] According to BBS (2015: 5-6) the definition given by, "a slum is a cluster of compact settlements of five or more households which generally grow very unsystematically and haphazardly in an unhealthy condition and atmosphere on government and private vacant land. Slums also exit on the owner based household premises. Often population density and concentration of structures are very high, sometimes, multiple structures are situated in one decimal of land."

[24] In these homes as often in the case of slum settlements (both those in formative stages and those already established) these services, although scanty, are availed of by dwellers who devise diverse creative politics with urban elites. See Roy (2009: 81) for populist patronage, and Roy (2011: 230) for occupancy urbanism of the powerful actors to understand how slum dwellers maintain relations of exploitation with urban elites to gain access to basic services and gain some degree of recognition in the formal process.

[25] Large numbers of people became homeless in their origins between 1985-2014 due to major cyclones in 1991, 1993, 1994, 1995, 1997, 2000, 2005, 2007 and 2009, and major flood events in 1991, 1994, 1995, 1997 and 2008 (Retrieved from CRED, 2018).

happened immediately after a disaster. Overall, any family that had lived in the fringe area less than five years at the time of my fieldwork, was not included in the study.[26]

I also came across some dwellings that were lived in solely by men who travelled seasonally back and forth between their original rural home and their urban destination. Their wives and children lived in villages, and on some occasions, these male workers did not regularly return to the city.[27] These dwelling sites may represent a distinct spatiality beyond the hetero-normative home typically comprised of families with parents and children. These homes could provide interesting insights into mobility and homemaking in the context of 'voluntary relocations'.[28] In my empirical observations, these homes seemed more like dormitories. However, I chose to explore the more commonly encountered homes that, in the context, were in the majority. All my sample homes were occupied by families with parents, children and sometimes grandparents who over time had potentially developed some socio-economic engagements in the neighbourhood.

Overall, two types of homes were found to have potential to serve my research interests: one type of home was on privately owned land and the other was on

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[26] I followed the migration pathway of families who came to Khulna in 2007-2008 or before. In 2007, major Cyclone Sidr hit Khulna's coastal region.
[27] See Mallick and Vogt (2015) for the different types of migration behaviours by individuals and families in the context.
[28] I have discussed the narratives of migrants outside 'voluntary relocations' in the paper titled "Small, Slow and shared voluntary relocations: insights from Bangladesh", now under review with Asia Pacific Viewpoint. In the paper I discussed that some of these male migrants eventually bring their family to Khulna city when they find the timing and opportunities are appropriate.

government owned *khas* lands.[29] Families with landless status occupy these homes.[30] All engagements with these households were initiated through informal and verbal negotiations with absent private landowners. In the following section I discuss the recruitment of participants, culminating in a choice of 17 households from 12 locations for in-depth exploration of my research questions.

2.3.3 Recruiting human participants in the 'contact zone'

Once I had identified the potential study homes I visited them multiple times. All discussions started with the introduction of my project and myself. Maintaining the ethics protocol,[31] I gauged their interest and their commitment to participate in the research process.[32] Discussions took place in their chosen settings such as the field, the roadside tea stall or the domestic yard. When some level of acquaintance had been

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[29] *"Khas* land is government owned land, which applies to agricultural, non-agricultural and water bodies. *Khas* land comprises of surplus land that violates the land ceiling law, other land owned historically by the state throughout colonial and Pakistani rule, alluvial land, land without owner, surplus/unused land of acquired land for public interest, auctioned land, etc. that has been distributed to landless families for 99-year use rights. The Ministry of Land is responsible for allocating *khas* land to the landless; however, corruption and bad motives have limited land allocations to the poor or landless. Land acquisition law/policy, shrimp policy, and other economic motives have deprived the landless of this land" (LANDac, 2012).

[30] Some of them admitted that they had homestead lands in villages that were inundated, swallowed by the sea or lived on by extended family members. Most denied any ownership of land in the origins that were viable to continue agriculture.

[31] The standard human research ethics protocol was guided by the National Statement on Ethical Conduct in Human Research (2007), as approved by the Macquarie University Faculty of Science Human Research Ethics Sub-committee. The approval letter (ref number 5201400923) is attached in Appendix 1.

[32] I clarified at the beginning that I had no connections with their patrons. I also had to navigate these discussions with caution, as they were associated with many uncomfortable feelings, such as psychological discomfort due to a sense of deprivation in the city or low economic capacities. Sometimes, the information about these homes exposed sensitive information about the politics and control of urban land by different agents in the city and there were issues of legality and illegality. On every occasion, I reminded them that if they felt uncomfortable they could either stop or present information with the relevant agents remaining anonymous.

established, discussions moved to the verandas or sometimes inside the kitchen. The initial discussions included their stories and struggles coming to the city. Later this lead to conversations about their livelihoods and different aspects of living in their present places. These later discussions revealed initial reflections of their existing homes, such as how these homes had been negotiated. Upon confirmation of the families' commitment, 17 families in 12 locations in the fringes participated in the in-depth fieldwork (See Table 2.1). These families primarily engaged in participatory photography exercises and multiple interviews, walking interviews and group discussions. I discuss the specific methods in the final section of this chapter.

Table 2.1: Distribution of participant families in Khulna's south-western fringes

	Participant families	***Tenure and floating locations in Khulna' urban fringes***		
	Name of female household head[33]	Location of home	Type of land Govt. owned vacant land - GL Privately owned land -PL	Years, since displaced from villages and living in Khulna
1	Hope	South Labanchara	PL	24
2	Seven	Harinatala		15
3	Silent			13
4	Faith	Chakrakhali		24
5	August	Jhardhanga		6
6	Rose		GL	14
7	Lilly	Bahsbaria	PL	6
8	Honey		GL	21
9	Little		PL	6
10	Beauty			15
11	Lucky	Hogladanga		23
12	Pearl	Ghola		15
13	Delight	Koya	GL	13
14	Seventy	Mostofa Mor	PL	14
15	Grace	Bastuhara Road		14
16	Swan	Arongghata	GL	25
17	Charming	Krishnanagar	PL	8

Source: Author's fieldwork, 2014-15

The participant families had been living in these fringes for between five and 25 years. These are 'ultra-poor' (as stated in the NGO inventory)[34] families without any land-based assets in Khulna city. Household heads were aged between 20 and 70 years

[33] All original names are changed to retain anonymity. I identify the participant homes by the female household head's name as they are more entangled in the more-than-human contact zones than men who spend more time away from home. They have also been the primary contacts during fieldwork. Although both male and female household heads participated in different stages of the fieldwork, the female household heads mostly participated in the photo-response that I shall discuss in chapter 3.

[34] The Land Occupancy Survey (LOS) of 1977 and 1978 defined three categories of landless: household with no land whatsoever, those who own only homestead but no other land and those who own homestead and 0.2 hectares of 'other' land. NGOs often define them as 'ultra-poor'. Research participants fall under the first category (FAO, 2010: 5, Bangladesh section). All the participant families are NGO beneficiaries due to their landless status.

old. As described in section 2.3.2, demographically, these are normative families typical in the context where each family comprises of male and female household heads with two to three children. The families of Hope, Faith, Lucky and Honey comprise of only couples as their children have grown adult; they became separate and moved to other locations either through marriage or for economic opportunities. The female household heads typically identified themselves as housewives. However, later in the course of the fieldwork they revealed their involvement in a range of informal economic practices within the neighbourhood to support their families (e.g. as domestic helpers involved in cooking, cleaning, gardening, etc., or running retail shops that were attached to the house).[35] Male household heads were considered to hold primary responsibility to earn money for the family. They were involved in a range of occupations, such as ferrying vegetables and snacks, rickshaw pulling, day labourers in the brick field and construction sites, farming work on others' lands, salesmen in the local *bazaar* etc. Besides giving service to the patron's land, male members were involved in multiple jobs throughout the year due to the seasonal availability and uncertainty of these livelihoods. Out of 17 homes (see photos in Appendix II), 13 were on privately owned land, where arrangements had been secured through verbal negotiations with absentee patrons. Another four homes were on vacant government owned land either by the road or the roadside canal. Although the government tends to overlook these unauthorised occupations until the land is required for public infrastructure, the occupiers are still

[35] These livelihoods are an interesting contrast to the female household heads who are slum occupants, as in my previous studies with colleagues in Khulna university on slums, we found that often women engage in formal employment such as participating as workers in the city's fish processing industries (Parvin et al., 2016).

required to seek verbal consent from adjacent private landowners.[36] All 17 families access these places for shelter by agreeing to look after absentee private owners' land and their interests.

The 17 participant families have contributed much to my exploration of migrant homes in the urban fringes of Khulna city. The families showed commitment in generating data about their home through multiple involvements in photo-response, group discussions and walking interviews. With a relatively small participant cohort, I was able to develop good relationships and devote greater attention to the details of different more-than-human homes. I was able to spend more time with each family, allowing me to document multiple entanglements with home ecologies. Female household heads committed the most to the project by participating in all of the methods. Female household heads chose to be the only ones to participate in photo-response, as I will discuss in chapter 3. Their participation has been essential as many of the women were closely attached and aware of the more-than-human contact zones of their home ecologies. Men were often less aware, travelling outside to attend jobs and more absent from home. Nevertheless, if they had chosen to be more involved different insights may have been developed. During post photography interviews, the male members accompanied their spouses most of the time and helped validate data. In the next section I discuss the specific methods developed to explore more-than-human homes.

[36] Within the existing power dynamics, powerful elites are in control of vacant government lands. See further Barkat et al. (2001).

2.4 Implementing methods

As discussed above, my chosen vantage point in these more-than-human migrant assemblages inspired me to consciously enact a set of 'messy' experimentations for informing research by thinking through the relations between human and non-human agencies in these home ecologies. I adopted a 'method assemblage' (Law, 2004), which combined verbal, non-verbal and performative modes of enquiry that extended beyond typical interviews to photo-response, walking interviews and group discussions. Additional interviews involved key informants and experts. In the following sub-sections I detail the specific methods that contributed to the findings chapters.

2.4.1 Photo-response

Photo-response was the major methodological innovation developed to generate data for this research. This experimental platform took inspiration from participatory photography techniques used in geographic knowledge production (see a summary in Table 2.2). These methods often complicate the conventional expert-centred mode of exploration by working 'alongside' rather than 'at' research subjects (Kindon, 2003). This inspired me to rethink how photographs taken by human participants could potentially elucidate their human-non-human 'contact zones'. In this regard, my PhD method builds on those methods (e.g. autophotography) in which the research participant has more control over the data collection process, first through the choices of photography subjects and later through the choices of printed photographs for discussion that were recorded on Dictaphone. The technique was further improvised with feminist geographical notions of situated 'response' and 'response-ability'

(Bawaka Country et al., 2013; Haraway, 2008; 2003) that I detail in chapter 3. I created opportunities for multiple moments of 'responses' for my human research participants in different phases – before, during and after the photography exercise – so that they are able to respond to the non-human agencies in their 'contact zones' and produce data by 'seeing, telling and being'.[37] In this way, my human participants were able to provide a "window into their *more-than-human*-social worlds and their interpretations of everyday life and their surroundings" (Oh, 2012: 283).

Table 2.2: Use of participatory photography method in geographic research

	Method used	*By*
1.	Autophotography	(Lombard, 2013; Johnsen et al., 2008; Dodman, 2003; Ziller and Rorer, 1985; Ziller and Osawa, 1985; Ziller and de Santoya, 1988; Meth and McClymont, 2009)
2.	Photo-friend	(Oh, 2012)
3.	Photo-elicitation	(Beilin, 2005)
4.	Photo-voice	(Chilton et al., 2009; Green and Kloos, 2009; Halifax et al., 2008; Sutherland and Cheng, 2009; Wang and Burris, 1997)
5.	Picturing place	(Schwartz and Ryan, 2003)
6.	Diary-photograph	(Latham, 2003)
7.	Self-directed photography	(Aitken and Wingate, 1993)

Source: Author's literature review

The data retrieved through photo-response creates a window to talk about the migrant homes that the participants revealed. I was aware that there are many aspects of these homes that may not have been revealed by participants – and instead only analyse what was revealed. To gain further insights about what was revealed in photo-response, and also what remain unrevealed, I initiated additional methods to supplement photo-response. The methods are summarised in Table 2.3 below. Photo-response

[37] See the description of different verbal and non-verbal modes of response in chapter 3.

provides most of the findings of this thesis. The findings presented in chapters 3, 4 and 5 are solely based on the photo-response data. Chapters 6 and 7 also utilise the photo-response data along with data gathered through other methods that are discussed in the following sub-sections

Table 2.3: Summary of methods

Methods	*Human participants involved*	*Contribution in specific chapters*
1. Photo-response	• Household heads from 17 families	All chapters
2. Walking interview & participant observations	• 3 female household heads • Others encountered in walking	Chapter 6 and 7
3. Group discussions	• Female household heads only (two) • Male & female household heads combined (one) • NGO beneficiary household heads & NGO officers (two)	All chapters, especially in chapter 7
4. Key informant interview	• 3 local leaders • 8 absent landlords • 3 land brokers • 4 planning academics and consultants • 3 urban planners • 1 lawyer • 1 activist • 4 NGO officers	All chapters, especially in chapter 7

Source: Author

2.4.2 Walking interview and participant observations

A growing body of geographic research has adopted techniques in which researchers walk with participants and become 'exposed to the multi-sensory stimulation' (Adams and Guy, 2007) of the surrounding agencies and their influences

on the practice and places being researched.[38] The method also exposes participants' attitudes and knowledge about their surrounding environment (Solnit, 2000). With a research focus on how human and non-human agencies influence each other to create livelihoods that secure homes, walking interviews provided a stimulating way to understand multi-scalar practices that are relevant to home – how the home is negotiated by participants' corporeal and sensory transactions along the routes they choose. Within the research context of home, works by Hitchings and Jones (2004), and the later works by Shillington (2008) also inspired me to adopt this mobile method. Their works highlight the fact that participants were better able to 'verbalise' their experiences and express their attitudes towards the garden ecologies by being 'in place' and consequently produced richer data. Inspired by these works I combined walking interview and participant observations together to explore the participants' engagement with their larger more-than-human settings beyond the physical home.

This method was included in a later phase to supplement photo-response. During photo-response, participants identified their involvement in livelihoods (e.g. agricultural services, gardening, trash collection, etc.) that took place outside of the physical home. To be involved in these livelihoods, participant women needed to remain mobile across multiple homes (including employers') within the fringes. To acquire a detailed account of the peripatetic behaviour of participants, the walking method offered additional experimental spaces through which they could discuss their practices, routines and negotiated spaces while they were on the move. In addition, I also gained the privilege of walking with them and observing their spaces and practices.

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[38] See summary of different mobile methods in Evans and Jones (2011), McGuinness et al. (2010), Hein et al. (2008) and Waitt et al.(2009).

The experimentation of mobilising multiple bodies (of the researcher and the researched) in spaces appropriately conforms to my more-than-human stance, acknowledging that 'knowing and being are not different to each other but can be mutually implicated' (Barad, 2003: 822). I was also inspired by works by Ingold and Vergunst (2008) and Longhurst et al. (2008) that acknowledge the role of 'body' as an important instrument in research. The method provided opportunities to create more 'embodied' encounters within the more-than-human fringe landscape by extending exploration beyond the familiar borders of the participants' own homes. These embodied mobilities assisted in extending beyond a verbal mode of inquiry that is sometimes thought to produce 'dead' (Lorimer, 2010) geographic accounts of places and practices.

Using the walking interview method, I documented three livelihoods – collecting trash, clearing weeds and crafting cow dung. The selection of livelihoods that involved trash, weeds and animal droppings was intentional, as the presence of these 'dis-ordered' (Douglas, 1966: 35) elements in domestic settings often indicates an inefficient home. So, by choosing these expendable non-humans I tried to further 'risk' (Law, 2004) the fieldwork. I challenged the concept of a home that is often perceived as 'made' through human agency, that builds and assembles pleasant elements within it. In contrast, my experimentation sought to unsettle the bounded home and expose the home's linkages with non-human agencies that are involved in '(un)making' the home (Baxter and Brickell, 2014).[39]

Three extended walking interviews took place. Three participants were each

[39] I have expanded this discussion in chapter 6 through employing the concept of unbounding.

followed on foot for a whole day, starting from their home, each covering roughly 8-12 kilometres. All conversations were recorded on Dictaphone. While they were observed and interviewed in multiple settings (Figure 2.4), I decided to play a passive role, following participants during this exercise. The route was not predetermined. Instead participants had the 'freedom' (Kusenbach, 2003) to determine the timing, dates, routes and their destination workplaces. Participants had control over what they wished to reveal, as I made clear at the commencement of each day's walking along with a standardised ethics protocol.[40] It was made clear that any participation in this study was entirely voluntary, the individual was not obliged to participate and if she decided to participate, she was free to withdraw at any time without having to give a reason and without consequence. During all three days, I patiently waited outside for my participants to gain permission from their employers for me to enter these homes, which was granted in each case. These workplace homes are typically built on a large area of land (on average, 0.5-1.5 acres per home) in Khulna's fringes. Comparatively well-off families own and dwell in these lots. Their domestic ecologies contain vegetable gardens, fruit orchards, fishponds, farm animals and poultry birds which were in part serviced by the research participants. The walking experiment provided unique opportunities to experience the settings of practice, the diverse non-human agencies that constitute the livelihoods, as well as to meet the employers and neighbouring women who were involved in these practices. Multiple interviews took place at each setting due to the presence of several persons.

[40] See Appendix IV for specific instructions given at the commencement of walking interview.

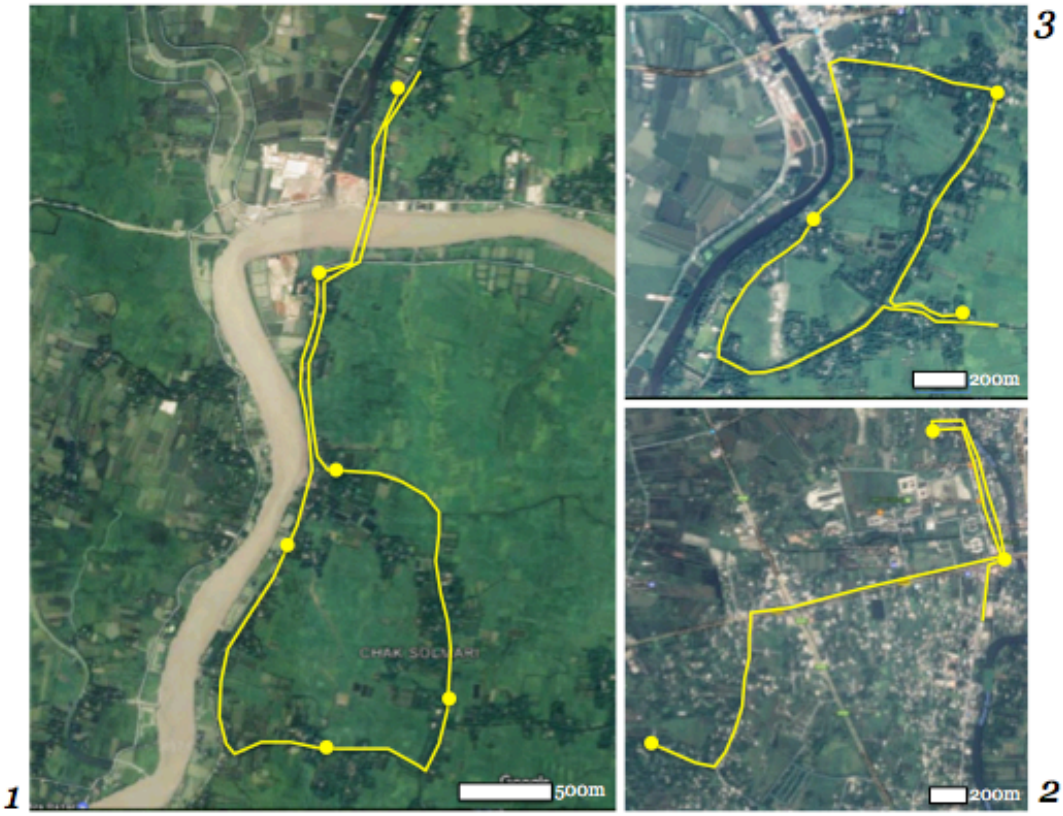

Figure 2.4: Walking interview maps (dots representing homes)
Source: adapted on Google map

By allowing the participants to take the lead on the pathway, it was possible to some extent to observe everyday practices, and this provided insights into how these "individuals connect and integrate the various [more-than-human geographies] of their daily life, other peoples, identities and places" (Kusenbach, 2003: 466,478). In various ways, the walking interview provided many 'intimate vantage points', on the move, that generated data about the multiple spatiality and realities that confront migrant lives. It offered an expanded view of migrants' more-than-human spatiality beyond the four walls and how participants are situated in the broader fringe ecologies and socio-ecological relations.

The walking interview goes beyond typical sedentary interviews and offered

opportunities to 'observe' (Jorgensen, 1989) my participants in their actual settings of practice. During walking interviews I became more attentive to space and place than at other times, becoming sensitive to the settings and the multiple agencies within, grasping additional information beyond what I was being told by my participants (see Creswell, 2012: 316).

I maintained a field diary to note the observations. My observations were not limited to the walking interviews only. During photo-response, I also had many opportunities to observe my human and more-than-human participants in their lived settings. I recorded these observations in the field diary in form of freehand sketches alongside textual notes. Through participant observation, I was also able to feel the hardship, the bodily pain and as well, the convivial relationships in these settings, that these women endured. The data retrieved through walking interviews and participant observations has been used to construct the arguments in chapter 6 and some parts of chapter 7 which focus on participants' mobility in the neighbourhood.

2.4.3 Group Discussions

Group discussion as a method has become increasingly acceptable in fieldwork as it provides some key benefits to the process of knowledge production. Firstly, compared with other solitary modes of inquiry; it provides a "time-effective way to explore the multiple perceptions, values and attitudes that people hold towards particular issues" (McGregor, 2010: 142). Group discussions offer opportunities of sociability (Goss and Lenibach, 1996) so that participants often feel more empowered and able to offset a sense of being dominated by the researchers. Participants are also able to express the nuances of their cultural life, which may have previously remained

unexplored in typical one-to-one interview settings. McGregor (2010: 148) argues that during group discussions participants often display norms and language similar to those used in their actual cultural settings. Therefore, this form of fieldwork is more likely to reflect everyday community dynamics. I found it an interesting instrument to cross-reference/authenticate the data received during personal encounters. For example, I observed many subtle attitudes displayed by male participants towards their partners. On many occasions I also observed the differences in attitude between male and female members towards non-human agencies of plants or flowers.

Five group discussions[41] were organised in different combinations of participants belonging to the 17 families and beyond. Relevant actors (such as NGO field officers, members from the community, land brokers, etc.) were also included in some groups. The discussions were organised in locations chosen by the participants to ensure that they felt comfortable (Appendix V). All discussions were recorded. Each discussion session continued for two to three hours, with people seemingly enjoying the opportunity to chat. Some snacks and remuneration of 15 AUD were provided to each participant after the completion of each session – although this was only made clear at the end of the session. I deliberately chose not to disclose such information to avoid bias in participation. Two sessions involved only female household heads so as to discuss more intimate narratives and their gendered socio-political struggles in these settings. These discussions helped to verify as well as provide a reasonable level of

[41] Through group discussions, I focused on creating spaces of social interaction with less intervention from myself. Between six and ten persons were expected in each session. However, I did not deliberately want to control the number of participants. During discussions that were intended to involve only female household heads, other were present as they gather together in the community settings.

representation for individual claims that were made during photo-response. During the household-oriented photo-response exercise, for example, of the 17 participant families only two families shared their experience of running retail shops, one on the corner of their patron's land and the other across the road. Group discussions further revealed others were running similar economic practices on the fringes. This information added a significant contribution to the discussions of 'transgressing' politics in chapter 4 and economic imaginaries in chapter 5.

In one discussion session, both male and female household heads were combined to elaborate on the gendered contribution to the negotiation of homes. The last two discussion sessions involved two different combinations of female household heads and NGO field officers. All household heads in these two sessions were NGO beneficiaries with some of them being a 'master trainer'[42] of different livelihood groups. These two group discussions contributed to building the data on NGO-led care relations, presented in detail in chapter 7. Overall, the group discussions effectively supplemented the other two methods of photo-response and walking interviews and expanded my understanding of the migrants' more-than-human settings.

2.4.4 Key informant interviews

Twenty-seven key informant interviews were conducted with local leaders, land owners, land brokers, planning academics and consultants, planners from KDA and KCC, lawyers, activists and NGO officials. I approached key informants who could

[42] Group leader in NGO-led care groups comprising of female beneficiaries is elected by the group members. NGO trains the leader to develop livelihood skills and later the leader as master trainer trains other women.

provide insights into rural-to-urban migration, Khulna's urbanisation process, Khulna's planning context, urban informality and so forth. These were individuals who I approached in different phases of the fieldwork because they were well-informed, accessible, and could provide leads to additional information.[43] On some occasions they also validated data, especially some of the sensitive claims by participant families in the context of Khulna's local planning. The interviews were open-ended, mostly involved topical discussion relevant to an interviewee's expertise/interest. Standardised ethics protocol was followed to gain consent and conduct the interviews. All interviews were recorded on Dictaphone. The interviews were conducted in the informant's office. On average, interviews lasted from one hour to one and a half hours.

Interviews with local leaders, such as the *Upazilla Parishad*[44] chairman and members, illuminated various aspects of local government and administration of peri-urban land use. Eight absentee landowners were identified by ownership signage (see Appendix VI) on their land and followed up by making appointments with them over the phone. They provided an understanding of their perspectives of sheltering migrants on their land. Only four owners corresponded to the 17 chosen homes. Three land brokers were interviewed in recognition of the land dynamics of urban fringes and to identify their role (if any) in these migrant homes. Four planning academics from Khulna University and the DADP consultant were interviewed to clarify various aspects of Khulna's urbanisation process and the planning contexts relating to migrants' informal homes in the KMP 2001. Two urban planners from KDA, and one from KCC

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[43] See Gilchrist (1992) for benefits in key informant interviews.
[44] *Upazilla Parishad* is the second tier administrative unit in the local government of Bangladesh.

were interviewed to gain insight into the planning context of Khulna's urban fringes. One lawyer identified during a group discussion and later interviewed, was occasionally involved in giving advice to homeless communities located on government owned *Khas* land. An activist (and University professor) from the *Bangladesh Paribesh Andolon* (Bangladesh Environment Movement) (BAPA) was also interviewed to understand the dynamics of urban transformation on fringe agricultural lands. Four NGO officials were engaged in the research to gain understanding of the context of support for migrant households' home-based livelihood strategies.

The key informant interview data was primarily used to discuss Khulna's planning context and different care relations in chapter 7 but the data was also occasionally used in other chapters.

2.4.5 Analysis and coding

Coding and data analysis were not based on preconceived indices of 'home' but rather followed 'issues and responses' (Houston, 2013:432),[45] weaving together visual and verbal contents. First, all data were brought back to Australia and stored according to standard ethics protocol. Identifiable data was stored securely as standard in practice, electronic materials was password protected and material archives were stored in locked cabinets at my home or on university premises. Also, the final destruction/disposal of the data will follow the standard confidential waste management protocol. Aliases and pseudonyms were used during data transcription and data analysis to protect the

[45] Houston (2013: 432), in the context of environmental justice storytelling, argues that stories and narrations do not focus solely on causes and effects, but because the stories are full of resonance, memory and evidence, they reflect discernible and powerful truths about the alternative imaginations of place.

identities of the participants. They were coded with the common Bangladeshi names and no personal information was identified in the published research documents.

Verbal material from the photo-response, walking interviews, group discussions and key informant interviews were translated from Bengali to English and transcribed. I did all the transcriptions myself, maintaining standard transcription protocols as advised by Creswell (2012: 215). The visual materials from the field (e.g. photos taken by participants, freehand diagrams from mapping exercises and group discussions) were cross-referenced to accompanying texts. Besides the mentioned visual materials, I captured nearly 7000 photos during fieldwork. These photographs were also organised according to dates, places and people I met. I often consulted the photos during data analysis. I also consulted my field diary that recorded participant observation notes and sketches to inform data analysis. The field diary helped recall the nuances of the settings of the data. The data was analysed using Nvivo, a qualitative data analysis (QDA) software package suited for small or large volumes of rich text-based and/or multimedia data (McNiff, 2016).

The logic of the data analysis was 'inductive' (Creswell, 1994), that is, from the ground up, rather than relying on theories. I remained consistent in my stance of not being prescriptive or theory-driven as suggested by the more-than-human approach taken in the research. Throughout the fieldwork I sought 'patterns and emerging typologies' (Lofland and Lofland, 1995) of data in every encounter with participants. I diligently noted them in the field diary and they were also noted in Nvivo as *memo* to help engage with the data. In the first stage of analysis, through 'open coding' (Strauss and Corbin, 1990), 28 different themes (such as, flow of body, informality, spirituality, resource marginalisation, etc. as shown in Appendix VII) were identified. The

contribution of non-human agencies in migrant homes and homemaking practices became explicit through this inductive approach to analysis. At this stage I had gone through successive revisions of my sub-research questions to meet the initial research objective based on the data to hand. Corresponding to the research questions, I further organised data under a smaller number of sub-themes, which eventually constructed the core findings of chapters 3 – 7. All findings chapters are written in the format of journal articles. The articles are now in various stages of submission to journals or publication.

In the following subsections, I discuss my multiple positionalities that influenced the research process.

2.5 Positionality

> Fieldwork is intensely personal, in that the positionality [i.e. position based on class, gender, race, etc.] and biography of the researcher plays a central role in the research process, in the field as well in the final text. (England 1994: 87)

I possess many positionalities that have undoubtedly shaped the research process. My past professional roles as a practising architect and a faculty member in the Architecture Discipline of Khulna University made me a distinct outsider to the communities I was interested in. My disciplinary knowledge of home and homemaking has shaped how I saw and understood home-making practices. Secondly, although I was born a few kilometres away from these research sites, compared to my participants' socio-economic status, I belonged to a relatively privileged class in Khulna city. I was brought up as an urban resident who had a limited (and somewhat negative) knowledge

of economically disadvantaged migrant lifestyles. Thirdly, I was a complete stranger to these participants, and yet I expected to gain access to the private interiors of these homes. Female household heads in these settings are often constrained by religious and cultural norms that restrict long-term exposure to men outside familial relationships. My outsider status was compounded as a man seeking to access and interact with mostly female householders in their intimate home ecologies.

I am aware that my multiple positionalities have shaped the research process and that 'power relations' in fieldwork must be negotiated (Kitchin and Tate, 2013: 219). To lessen perceived power relations, I made an effort in every encounter to become closer to these families. When introduced to a new family, I took time to clearly explain my intentions. I let them identify me with my present position as a student interested in learning about their stories in order to understand their homes and homemaking struggles. I assured them that all of the information gained would be used for academic purposes only. I met the families on multiple occasions. Where possible, the first meeting was accompanied by a neighbour whom I already knew due to the snowball nature of finding participants. I gladly accepted any food the families shared with me.[46] Even when they offered a chair for me to sit on, I politely chose to sit on the ground to avoid any misplaced sense of power or authority. I participated in activities with children of the family (such as playing cricket on the adjacent road, crafting clay toys).[47] Sometimes my seven-year-old daughter accompanied me. Her presence was a

[46] A typical norm in the context is to offer some food, or at least a glass of water to a guest, otherwise the household is thought to be cursed.
[47] In compliance with the ethics protocol, I did not interview any children. These activities were to establish rapport. However, on many occasions during conversations, the children were present with the household heads.

great help in establishing a level of trust in the interview settings. The meetings took place in a range of spaces, such as the roadside tea stalls outside the home, inside the courtyard, on the verandas, and in the fields. In time I also gained access to the kitchen.

The gendered positionality was negotiated with utmost caution. On most occasions, the first entry to these homes was made in the presence of the male members. Discussions taking place in their familial setting in the presence of in-laws and children were helpful. Irrespective of the age of participants I called them *Apa* (sister in Bengali), which they found comfortable. I restrained from asking gender sensitive questions unless they voluntarily shared such information. Every meeting was made by appointment over mobile phone to meet them at their most convenient time and space. The introduction of the camera helped situate me further in these gendered settings as the camera created a sense of goodwill that I was giving them something instead of grabbing information from them. The use of the camera also created a useful platform for them to reflect upon their lives and their roles in the domestic settings. The personal time they spent using the camera created a greater sensitivity of their active control over the choices of information they wanted to share with me. Such sense of empowerment established at an early stage bolstered relations throughout the fieldwork.

While writing the thesis I discovered another positionality of which I had been unaware. My parents own a significant amount of land in these urban fringes of Khulna. It was only after the completion of my fieldwork, that I learnt from my parents that some families are sheltered on these lands. Although my parents have maintained typical patron-client communications with these families for years, I have never met the families due to studies and being abroad since 2009. During my fieldwork I was neither aware of this situation, nor had the families participated in my research.

Overall, my multiple positionalities as a middle class male PhD researcher have often caused me anxiety during fieldwork and in terms of how I have approached the research. Throughout the fieldwork, I constantly and critically interrogated my multiple human positionalities in relation to the research participants. I was aware of the fact that "a complete immersion which would allow me to work 'from within' is an impossible position because the researcher and the research subjects could never be the same" (Rose, 1997: 313).[48] Instead of attempts to become a complete 'insider' or remaining at the 'outside', I remained flexible as situation demanded. I was not within a 'monolithic' (Franks, 2002: 41) position in relation to my participants. I critically reflected on my engagements and experimentations of each day and remained flexible in setting strategies for the next day if required. At times I also felt powerless as I was unsure about the outcome: I had taken a 'risk' through the adoption of experimental and spatio-temporally contingent methods and was unsure whether I was being exposed to a 'partial view' (Ali, 2015: 787). However, these risks are part of the methodology, and I never intervened to restrict the spontaneity of the data generation by participants.

The fact that I shared the same language, nationality and cultural codes with the participants also facilitated the engagements as I was able to grasp the local dialect, gestures and subtle acts that have enriched the overall research.

In the context of my thesis, which aims to explore multiple human and non-human agential accounts of more-than-human homes, I also needed to reflect upon my more-than-human positionality.

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[48] See also the discussion in Moss (1995) on different aspects of social political distance between the researcher and 'researched.'

2.5.1 More-than-human positionality

> What is required in order to be "a receiver" of communicative and other kinds of experience and relationship is openness to the other as a communicative being, an openness which is ruled out by allegiance to reductive theories. To view such differences as simply "theory choices" is to overstate the intellectualist and understate the performative aspects involved, which is captured somewhat better in the terminology of posture or stance. Is it to be a posture of openness, of welcoming, of invitation, towards earth others, or is it to be a stance of prejudged superiority, of deafness, of closure? (Plumwood, 2002: 175-176)

Val Plumwood's suggestion of being attuned to a posture, a stance of openness towards non-human *others* has been revelatory to me and allowed me to rethink my positionality in the research beyond expert superiority, pre-given theoretical framings and my human subjectivity to accept 'multiple [beyond human] knowledges' (Suchet, 2002: 154). As the research took place I came to realise that my fleeting engagements within these assemblages were of little use in delineating migrants' more-than-human accounts. I hadn't lived enough in these homes to relate to the 'goings on'. Nor could the more-than-human narratives be effectively unpacked if I relied on a humanist repertoire of interview only. What mattered more was how or what I could do so that the 'socio-material eventfulness' (Jacobs et al., 2012: 131) of these migrants' more-than-human 'goings on' could be made at least partially knowable to me "as it happens, contemporaneously" (Dowling et al., 2016a: 1).

I focused on creating 'spaces' of experimentation through photo-response and walking interviews so that the human, less-than-human and other non-represented 'voices' could participate in the methodological 'doings' by "decentring [my] human [and expert] agency of thinking" (Dowling et al., 2016b). I 'slowed down' (Whatmore, 2013b) to 'rework' the "boundaries of research, representation and knowledge" (Last, 2012). I let the human households that were deeply engaged in these more-than-human domestic assemblages identify and present the "minor, momentous and subtle" non-human influences (Clark, 2003: 42) in their homes. It was a deeply unsettling task to intervene less. In initiating photo-response, I was encouraged by the Bawaka project collective (Bawaka Country et al., 2015) where the positionality of human researchers/authors is redistributed to acknowledge that the place (as *Country*) itself speaks on behalf of the many agencies it accommodates. Within the Bawaka ontology,

> everything exists in a state of emergence and relationality. Not only are all beings – human, animal, plant, process, thing or affect – vital and sapient with their own knowledge and law, but their very being is constituted through relationships that are constantly re-generated. (Bawaka Country et al., 2015: 2)

This suggested that, rather than being caught up in traditional humanist repertoire and positionality, the 'goings on' at migrant homes became my chosen 'vantage point' (Haraway, 1988; 1991a) in which the boundaries between human and non-human, researchers and researched, insiders and outsiders should collapse. Photo-response helped me know more about these homes through their lived socio-material eventfulness. Further, through initiating walking interviews, I looked to know the field in more 'emplaced' and 'embodied' ways (Howitt and Suchet-Pearson, 2003) beyond

my expertise (and the preconceived) analytical abstractions. My attempts at spatial mapping within photo-response and walking interviews reaffirmed that the practice of knowing a place and being in a place cannot be separated but are mutually implicated (Barad, 2003); thus places and their diverse more-than-human collaborations among agencies are able to inform knowledges beyond the singular anthropocentric subjectivity.

Nevertheless, remaining constantly aware of both my human and non-human positionality, I still had to make considerable efforts to enable the collaborations, document them and later write them up, which is inevitably influenced by the more-than-human relations that took place in more distant settings once I returned to Australia. Time and again I consulted previous works that have taken a similar stance by experimenting with strategies of vitality, performativity, corporeality, sensuality, mobility and many other concepts (see Vannini, 2015) for establishing engagement in the field so that both the human and non-human "non-researcher agencies" (Suchet-Pearson et al., 2013: 36) are visible, their 'non-represented' (Vannini, 2015) concerns heard through local 'exchanges' and 'insights' (Thrift, 2003b; 2003a: 114) of marginal dwellings, and which, however, are finally 'written' (Wright et al., 2012: 51) by me, on a computer, in consultation with supervisors, families and friends, in another world.

2.6 Conclusions

The chapter has presented the processes of research design in four sections: first by describing the more-than-human methodological 'turn'; then how the 17 migrant families from the south-western fringes of Khulna city were identified and included; third, the specific methods used; and finally a discussion of my human and more-than-human positionality in the fieldwork. With a more-than-human ontological stance I set experiments so that my human participants could reflect on their more-than-human relations, and which were my vantage points to explore migrant homes. I sought to reduce perceived power hierarchies, which could be misinterpreted as an endeavour to become an insider. I came to know about the socio-material goings on, the non-humans and their many "matters of concern" (Latour, 2004: 24). Altogether the messy experimental and context sensitive approach has provided insights into more-than-human homes and homemaking practices amongst migrant communities on the fringes of Khulna city.

A final useful quote:

> The more knowledge about… the disease advances, the more complex the picture becomes. The number of actants involved (all kinds of proteins, antibodies, enzymes, etc.) multiplies and causal links proliferate. As a result, differences between individual patients intensify, and the number of specialists that can be mobilised increases. This opens the way for strategic options. (Callon and Rabeharisoa, 2003 in Graham and Roelvink, 2010)

It is my hope that through my stance I have been able to offer spaces for the recognition

of the multiplicity, heterogeneity and the many differences that exist in these rural migrants' more-than-human assemblages beyond an objective and singular reality. I hope that the many agencies that start to speak in the following five findings chapters will find their way to being heard by practical, professional and academic audiences who often have misheard, misinterpreted or completely ignored them.

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Finding a method

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Chapter 3: Photo-response

Background

More-than-human theoretical thinking has been well developed in geographic scholarship, yet its practical aspects are not yet adequately explored (Dowling et al., 2016b; Lorimer, 2010). In this regard, this chapter's contribution is methodological, answering the first sub-research question of this study: what is an appropriate method to explore home/homemaking informed by more-than-human concepts? With an ontological stance that human and non-human alike participate in shaping practice and places, I adopted an experiential method to enable my human participants to reflect on their more-than-human relations, which are my vantage points to explore migrant homes. I took inspiration from geographic works (refer Table 2.2 in chapter 2) that use participatory photography to explore the 'hidden' dynamics of marginalised communities and their neighbourhood settings (for example, see Lombard, 2013).

This approach was useful to decentre the traditional researcher's subjectivity as the research participants generate the data. The technique is improvised and responds to the geographical notion of situated 'response' and 'response-ability' (Bawaka Country et al., 2013; Haraway, 2008; 2003). The innovated method, here termed as 'photo-response', created opportunities for participants to record multiple visual, verbal and experiential responses to their everyday more-than-human domestic settings and to think through how non-humans co-constituted the home. The chapter illustrates in detail how the method is applied, drawing on one household's articulation of photo-

response. The chapter provides insights regarding the use of photo-response in doing more-than-human research.

One important point to be noted that the photograph itself in many research instances in geography, art theory and across social sciences enacts a vital materiality itself. For example, Gorman-Murray (2017) uses the photographs of his home's interiors to show how the conceptual and visual precedents of images depict the material interiors as queer. However, in my research I deliberately did not focus on the agencies of photographs as objects. Aligning with Rose's (2008: 157) proposition of 'what can be *done* with images' prior to the consideration of what images 'represent' I mostly focused on the performative aspects of images to enable participants' responses to the research setting through participating in image-making processes. This leads to a focus on important dynamics of 'power' and 'representation' in the captured photographs by those who actively participated in making these photographs had a greater representation in informing about them.

Due to photographs being produced by mostly women, they had a greater say in the post-photography discussion. Males were sometimes present but less active in photography or subsequent interpretation of the photos, rarely challenging the process, playing a much more secondary role than much Bangladeshi research where males often dominate interview settings. It may not be conclusively claimed; however, the agency of the cameras and images helped empower women to express their homes.

Statement of Authorship

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Principal author's contributions

Name of principal author (candidate)	**Ashraful Alam**
Contributions	✓ Fieldwork ✓ Data analysis ✓ Literature review ✓ Conceptualisation of the article ✓ Writing of manuscript ✓ Revision of successive drafts ✓ Acted as corresponding author.

Co-authors' contributions

Name of first co-author	**Andrew McGregor**
Contributions	✓ Supervised development of work ✓ Assistance in data analysis ✓ Manuscript evaluation and edit
Name of second co-author	**Donna Houston**
Contributions	✓ Guidance in literature review ✓ Manuscript evaluation and edit

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Pages 103-112 of this thesis have been removed as they contain published material. Please refer to the following citation for details of the article contained in these pages:

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Understanding home/homemaking

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Chapter 4: Politics of home

Background

Chapter 4 is based on the second sub-research question: what are the politics of home, informed by more-than-human relations? In exploring alternate more-than-human politics of home, this analysis puts aside an anthropocentric interpretation of politics in which "power, in its multiple forms, is wielded, negotiated and circulated across and between different [human] social groups, resources and spaces" (Paulson et al., 2004:28). Instead, with recognition of the vitality (Bennett, 2010) of non-human agencies in influencing human social attributes and circumstances and communicating human actions, I reassess the asymmetric representation of human subjectivity and representation in home and homemaking. In more-than-human home, power is mobilised by humans and non-humans together becoming critical 'actants' (Whatmore, 2002; 2006; Latour, 2004b) and reconfiguring more-than-human subjectivity. Photo-response reveals three nuances – of complying, transgressing and reimagining – through which migrants continually negotiate informal access to urban land for shelter. Non-human agencies bind the patron and the sheltered homemakers beyond typical patron-client linear power dynamics and, through more-than-human politics, the migrant participants are able to play more transformative politics to gain benefits from within and beyond patron-defined boundaries and finally develop a sense of belonging to urban land, despite their lack of secure tenure.

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Co-authors' contributions

Name of first co-author	**Andrew McGregor**
Contributions	✓ Supervised development of work ✓ Assistance in data analysis ✓ Manuscript evaluation and edit
Name of second co-author	**Donna Houston**
Contributions	✓ Manuscript evaluation and edit

Beyond anthropolitics: the more-than-human politics of homemaking through complying, transgressing and reimagining

Abstract

In this paper, we seek to move beyond anthropocentric focus of much research into the politics of homemaking – what we call anthropolitics – to instead develop a more-than-human approach. We adopt the ontological stance that non-humans have vital political (and communicative) agencies and capacities that co-produce affective political processes. Researching seventeen rural migrant families living in the fringes of Khulna city in Bangladesh reveals three distinct more-than-human political strategies: complying, transgressing and reimagining. These strategies enable migrants to maintain relationships of access to absentee patrons' land, negotiate new practices beyond patrons' land and reimagine a more-than-human sense of self and belonging that challenges conventional dichotomies. We argue that greater sensitivity oriented towards non-humans within political processes can result in more inclusionary institutional and planning responses. We conclude that current efforts within urban political ecology to go beyond anthropolitics are producing valuable insights that can help reconceptualise the uneven production of urban spaces in ways that go beyond humanist attributes of gender, class, race and ethnicity, and infuse multi-species urban living with alternate, emancipatory and hybrid possibilities.

Keywords: Bangladesh, urban fringe, migrants, anthropolitics, more-than-human politics, homemaking

Introduction

> "Fields remained inundated for months; there was no work, no food; so, we moved to Khulna. We, four families left the village the same day. Since then we are living here, on others' land. The land changed hands a couple of times; yet we are here, living on the land. As we do not own any land they (local government officials) behave as if we never existed. But, you know, we need to find ways to exist." [August[1], the female household head]

August's story resonates the struggles of existence of internally displaced rural communities who are facing multiple forms of exclusion in negotiating home in the fringes of Khulna city in Bangladesh. After being uprooted from their coastal rural origins, migrants have chosen to live in these predominantly agricultural urbanizing fringes for decades. They are 'spaces of hope' (Harvey, 2000) for these 'peasant-turned-migrants' to engage with ways of living, aligned with their past farming skills and agrarian lifestyles. They take care of absentee owners' land and interests, in exchange for shelter and a place to live. Yet after years of living and working on the land, it remains a precarious existence for many migrants. August's home, for example, has shifted multiple times based on the availability of vacant land, informal consent from absentee patrons, and, the subject of this paper, opportunities for engagement with non-human agencies (such as plants, animals, earth and water). To sustain their informal homes, August recounts, they 'need to find ways' to exist in a context where precarity

[1] Participant's original name is removed to retain anonymity.

is reproduced by uneven power relations such as absentee patrons' high expectation of return from the land and the lack of recognition of these informal homes by local government bodies.[2]

This paper explores the ways rural migrants like August access and appropriate urban space despite lacking formal rights to land. Instead most negotiate informal patron-client 'relationships of access' to land.[3] We argue that while these patron-client relations shape the politics of home, such relations and homemaking politics are also infused by and with non-human agencies. Plants and animals co-produce critical competencies for vulnerable migrants to devise strategies that increase the viability of making and sustaining home. Migrants negotiate with plants and animals, just as they do with patrons, to secure homes and livelihoods. These non-human contributors to the politics of homemaking have largely escaped academic and planning attention for two main reasons. Firstly, planning theory is "undergirded by an ontological exceptionalism of humans" (Houston et al., 2017:1) making it currently incapable of appreciating the dynamics of non-human agencies. Secondly, political theory has similar anthropocentric limitations, and while more attuned sub-disciplines like urban political ecology have contributed to understandings of non-human agencies, it often stops short of recognising non-humans as political subjects, most often limiting them to objects of politics (Barua, 2014; Gabriel, 2014; Menon and Karthik, 2017; Metzger, 2014; 2016).

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[2] Sowgat et al. (2016: 12) argue that although the informal sector plays a significant role in housing the urban poor in Khulna, legal obligations prevent city managers from taking measures to favour informality. Hakim (2013) indicates that there is no term used in Bengali with similar meaning as that of 'rural-migrant' and often any informal migrant in the Khulna context is largely generalised as '*Basti-bash*i' meaning 'slum dwellers'.
[3] See Ribot and Peluso (2003) for the definition of 'access' as the 'ability to derive benefits from things' in the absence of formal rights.

In this paper we seek to go beyond these limitations by explicitly recognising that the politics of securing homes in marginal contexts involves complex more-than-human negotiations in which non-humans are influential political subjects.

In order to conceptualise more-than-human politics, we take inspiration from feminist and cultural geographers' acknowledgement that non-humans have capacities to influence human motives and practices (Bennett, 2010; Braun and Whatmore, 2010). Grove (2009: 207, 215) observes that "non-humans are at once sites of constituent possibilities for new identities and subjectivity" (p. 207); they bear multifarious yet alternate political potentials that emerge through the "interstice of the human and the non-human" (p. 215). Bennett (2010: viii) explains, that if we take seriously the vitality of non-humans, they could provide different political responses to the world. For example, non-human agencies of water, energy, plants, animals and things guide the imagination (e.g. dirty, clean, green) and materiality of spaces exceeding anthropocentric political intentionality through their mobilisation, control and flow within the diverse (and often uneven) metabolic assemblages of the city (Hitchings, 2004; Kaika, 2004). Such work inspires us to search for heterogeneous more-than-human politics behind urban living that are "mobilised through the human and nonhuman becomings" including the "associations and attachments forged in and through more-than-human relations" (Hinchliffe and Whatmore, 2006: 124).

In the following sections, we first conceptualise more-than-human politics by exploring the 'vital' agencies of non-humans in urban landscapes. We approach places and practices as myriad 'socio-ecological processes' exceeding anthropocentric spatial logics and control (Kaika, 2004; Swyngedouw, 2006). We then provide a brief explanation of the context and specific methods used. With the help of visual and verbal

narratives, the subsequent section describes three stages of more-than-human politics in Khulna: complying, transgressing and reimagining, through which our participants access, appropriate and negotiate home. By foregrounding the dynamics of non-human agencies within urban land, we show that the human subjects no longer hold the sole political agency in migrants' locational choices in Khulna, nor is an informal home simply a linear outcome of interaction between absentee patron and the impoverished occupier. Non-human fringe ecologies play vital political roles to bind together urban inhabitants (patrons and clients) in unforeseen ways and actively contribute to socio-ecological outcomes for communities – securing homes and reproducing marginal urban spaces. The paper concludes by discussing the political potentials of non-humans in rethinking cities beyond anthropocentric narratives and how such ontological detours can potentially contribute to planning theory and urban political ecology in exciting and transformative ways.

From anthropolitics to more-than-human politics

Politics are typically understood as a variant of the following definition: "the [human] practices and processes through which power, in its multiple forms, is wielded, negotiated and circulated across and between different social groups, resources and spaces" (Paulson et al., 2004: 28). The human orientation of most political studies we refer to as 'anthropolitics' in order to distinguish it from the 'more-than-human politics' discussed later in this section. The term anthropolitics implicitly highlights and critiques the focus of much political theory by acknowledging the absence of non-humans. This provides an opportunity to "retheorise *politics* [development in original] in creative more-than-human ways, by recognising the active capacity of non-human

agencies in the co-production of *political* processes" (McGregor, 2017: 350). Anthropolitics provokes a reassessment of the asymmetric representation and study of nature-society, and encourages new forms of politics, or as Latour suggests, "let us patch the two back together, and the political task can begin again" (Latour, 1991: 144).

Anthropolitics perpetuates understandings of power as social and historical constructions and conditions that shape uneven distribution of access to and control over 'natures' based on class, race, ethnicity and gender (Peet and Watts, 1993; Rocheleau et al., 1996). Power operates within 'ambiguous' institutional arrangements of 'proximity and distance' to exploit 'natures', always normalising such objectification (Allen, 2011; 2003). The study of power as a human affair obscures how nonhumans are political subjects. Struggles for 'political rights, entitlements and desserts' are entangled with environmental processes; but questions of political address and redress typically 'only apply to people' (Metzger, 2016: 583; Houston et al., 2017; Narayanan, 2016). Urban political ecology inherits a similar bias with regard to not acknowledging nonhumans as political subjects. Here, although cities are understood to be complex socio-ecological assemblages where politics are extended to encompass more-than-human relations, the articulation and enactment of 'rights to the city' remain decidedly human (Metzger, 2016; Houston et al., 2017).

Some progress is being made to address this dilemma. Heynen (2017) cautions that to keep pace with the ongoing unevenness and asymmetric production and reproduction of urban natures, researchers must engage with 'embodied and heterodox' politics (p. 1). This is an important proposition because by 'putting nature into a political preoccupation that had been too exclusively oriented towards human', nature continues to be cornered, if not 'rejected', as being 'out of politics' (Latour, 2004b: 19).

Political ecologists (Srinivasan and Kasturirangan, 2016; Barua, 2014) have also recently questioned the field's 'human exceptionalism', reaffirming that non-human agencies of nature are regarded as less politically charged because the human social circumstances and identities continue to legitimise and delegitimise 'whose nature' (Escobar, 1998) is to be practised. Heynen's proposition, therefore, is an invitation to disregard the anthropocentric orientation in politics and embrace more disruptive forms of politics through recognition of non-humans actively circulating political agencies.

To disrupt the anthropocentric 'bias' (Menon and Karthik, 2017), and reduce the 'asymmetric' (Barua, 2014) positioning of non-human nature in constructing the political, we borrow from feminist critical ontological standpoints that regard non-humans as 'vibrant agents', neither restricted to a passive 'intractability', nor infinitely reducible as political objects reflecting human cultures and desires (Bennett, 2010: 5). On the contrary, non-humans can be considered as having the 'lively capacity' (Head et al., 2015) – that is, 'the ability to make things happen, to produce effects' (Bennett, 2010: 5), thereby influencing outcomes of human practices and places through their connections, disruptions and flows. A classic example is Swyngedouw's (2009) 'hydro-social' cycle which acknowledges water's own social, cultural and political agencies that not only choreograph urban inhabitants' access to and exclusion from water but also conjoin far and near spaces, and actors in particular, in techno-political assemblages. Different other 'natures' such as plants (Longhurst, 2006), animals (Hovorka, 2006), pests and insects (Power, 2007; Ginn, 2014), energy (Hinchliffe, 1997) and food (Shillington, 2013) also emphasise active non-human political agencies in explaining the socio-spatial outcomes at the heterogeneous intersections of class, gender, homes, urban spaces and so forth.

To 'reinvent' nature's political potential, Castree (2003b: 207-208) suggests "expanding political reasoning to include non-humans, yet without resorting to the idea that the latter exist 'in themselves'" (see also Houston et al., 2017). As Hinchliffe and Whatmore (2006: 136) write: "instead of playing the political in the realm of *human's* conscious judgment and knowledge" of rights and entitlements, non-anthropocentric politics are grown in a 'hinterland of affectivity' (Diprose, 2002: 175) in the company and modality of non-humans. Bennett's work on 'things-politics' draws on similar notions in what she calls 'politics of enchantment', which are not determined by the pre-given structures, entities and human social realities interpreting nature and the outcomes, but rather nature that actively circulates affects and helps enchant (Bennett, 2016: 9-12). 'Affects' evoke motivation for 'the *human* to become minor', thus humans can undergo processes of 'de-subjectification' (Lawlor, 2008) that reorient them within a more-than-human world – for example, how 'recycling' rubbish and trash shapes our consumption behaviour and situates us within affective assemblages with the "lively and potentially dangerous matter" (Bennett, 2010: viii). Non-anthropocentric politics is more about 'learning to be affected' with non-humans – "the more you learn, the more you know the differences and the more realities will be registered" (Latour, 2004a: 213).

In non-anthropocentric politics, from here called more-than-human politics, power is distributed across humans and non-humans and non-humans are considered critical 'actants' (Whatmore, 2002; 2006; Latour, 2004b) which have efficacy to change and do things. 'Actants' mean nothing in isolation, but their agential accounts, if taken beyond the human-non-human 'impassable divisions' (Brown, 2007: 260), and if they form sufficient 'coherence' (Bennett, 2010: viii), can make a difference, producing

effects or altering the course of effects. Actants and their coherent 'more-than-human-social' (Whatmore, 2003: 90) formations can disrupt pre-given human social conditions by generating alternate meanings, subjectivity and socio-natural outcomes. Non-humans are no longer left "external to the human subject and his labour" (Grove, 2009:208) or the "effects on nature and the problem thereof" (Castree, 2003a: 294). Instead, moving beyond anthropolitics requires recognising non-humans' 'subject-forming dimensions' (ibid., 207) in which humans and non-humans alike participate' (Bakker and Bridge, 2006: 19).

The task of more-than-human politics, then, is "not to orient itself around human or non-human but shift from the certainty of the bounded actors to the uncertainty of their constitutive assemblages" (Menon and Karthik, 2017: 92). What kind of political subjectivity and power such moments of non-privileged 'becoming(s)' are able to generate is a critical question. 'Becoming' within assemblages has been explored within the Indigenous Australian Bawaka context, in which 'human, animal, plant, process, thing or affect – vital and sapient with their own knowledge and law…. are constantly re-generated' (Bawaka Country et al., 2015: 2). Once the assemblages have identified their 'shared lines of flight' (Bennett, 2016: 26) they can produce new and unpredictable outcomes. Thinking beyond anthropolitics is a provocation for attending "new types of encounters (and conviviality) … giving rise to new modes of relations i.e. to new political practice" (Paulson, 2001: 112). Instead of human subjects in isolation the transformed more-than-human subjectivities / alignments can "inflect, disrupt and obstruct *(human)* practices", human political boundaries, influence human intentionality and exceed human intentionality (Sundberg, 2011: 318). As a notable example, Kaika (2004: 266, 283) explains that human social processes such as crime,

homelessness and poverty, and non-human agencies and processes embedded in water, air, sewage or even land, can generate new autonomous politics to negotiate habitable spaces, such as home.

A number of studies emphasise the importance of more-than-human politics within marginalised contexts. For example, non-humans such as chickens (Hovorka, 2006) and plants (Shillington, 2008; Shillington, 2013) imbue vital political agencies through which marginalised communities (especially women) can reproduce socio-natural logics and claim their right to habitable spaces within hegemonic macro-capitalist frontiers. Sultana (2009: 359) has shown that both social heterogeneity (gender, class) and natural heterogeneity (drinking water, arsenic deposits, safe aquifers) together contribute to marginalised communities' spatial participation. These studies empahsise that the 'political' is made out of 'dynamic relations' of two binaries (Tsing, 2013: 34). Rather than expanding the sphere of politics in a manner that enrolls non-humans and their spaces for 'human objectification' (Tsing, 2013: 36), such approaches seek to reorient a collective 'more-than-human-social' configuration (Head and Muir, 2006: 522).

Echoing Barad's approach of "cutting the agency [of politics] loose from its traditional human orbit" (Barad, 2003: 826), we develop a means of investigating the politics of home in ways that do not "presuppose human participation only" (Latour, 2004b: 20). Our explanation is informed by the observation that recognising how non-humans and marginalised humans are entangled can disrupt "human/non-human categories, the relation between the two and relations each has with other *social* categories" (Shillington and Murnaghan, 2016: 2), such as, for example, relations with absentee patrons or urban institutions. The disrupted categories between human and

nonhuman dwelling and precarity are key sites of political reconfiguration in our study. The participant homemakers are neither sensibly homed with a formal legal claim on their inhabited spaces, nor can we call them homeless subjects because of their sheltered existence on patrons' lands, even though it is a fragile existence. Our findings will reveal that the study homes are both formed and continuously forming through migrant presences, performances and 'becoming' with non-human agencies of land. The (human) homemakers and (non-human) agencies of land form new modalities of politics and power that challenge conventional understandings of patron-client relationships. We count these hybrid capacities as emergent more-than-human political subjectivities that extend beyond anthropolitical norms and are critical in securing migrant homes.

Study area and methodology

The fieldwork was carried out in 2014 and 2015 in Khulna city, the third largest city in Bangladesh and the administrative seat of Khulna District and Khulna Division. The structural boundary of Khulna city (Figure 4.1) covers an area of 451.18 sq. km. including an expansive fringe area of 181.16 sq. km. (KDA, 2014). The fringe landscapes, where our study participants negotiate home, have experienced unprecedented land speculation since the inception of the latest Master Plan in 2001 (KDA, 2002). As a consequence, at present, absentee elites own the majority of these fringe lands (Alam et al., 2016). Until the point where planned residential and commercial developments are feasible, rural attributes are retained through agricultural activities such as rice plantation, shrimp farming, sweet water fish farming, and poultry and shrimp hatcheries, providing returns on the landowners' investment. These fringe

ecologies offer opportunities of agricultural labour, attracting peasant-turned-migrants from southern coastal villages who come with few material assets.

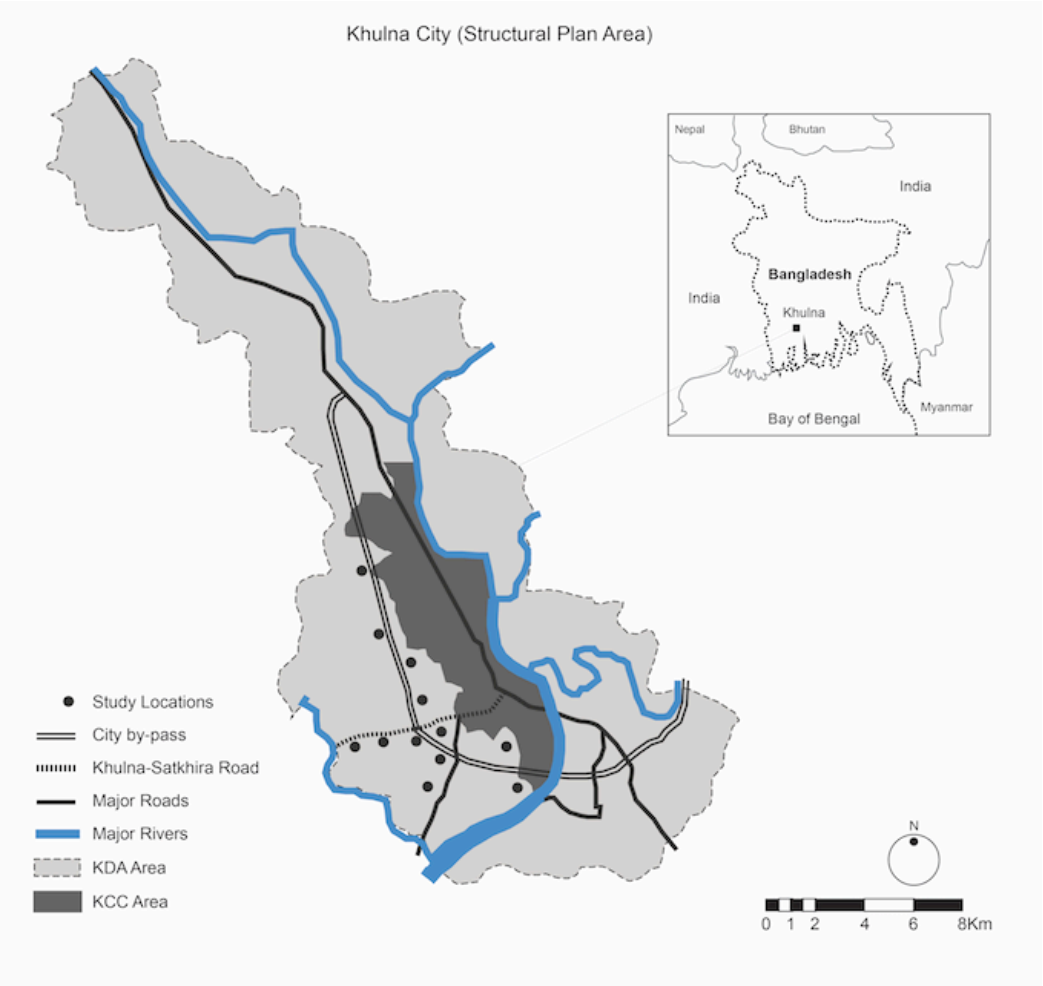

Figure 4.1: Study locations in the south-western urban fringes of Khulna City

The fieldwork commenced along the major infrastructure developments (Figure 1) of Khulna's south-western fringes. These roads act as gateways for coastal migrants to Khulna. Seventeen internally displaced families at twelve locations (Table 4.1) were identified through explorative snowballing building on the lead author's past professional experience in this area as an architect and contacts with local planners, community leaders and NGOs. The participant families had been living in these fringes

for between five and 25 years. Thirteen homes are on privately owned land, where arrangements have been secured through verbal negotiations with absentee patrons. Another four homes are on vacant government-owned land either by the road or by roadside canals. Although government tends to overlook these unauthorised occupations until the land is required for public infrastructure, the occupiers still need to seek verbal consent from adjacent private landowners.[4] All seventeen families access these places for shelter by agreeing to look after absentee private owners' land and their interests.

Table 4.1: Distribution of participant families in Khulna's south-western fringes

Participant families	*Tenure and floating locations in Khulna' urban fringes*			
	Name of female household head	*Location of home*	*Type of land Govt. owned vacant land - GL Privately owned land -PL*	*Years, since displaced from villages and living in Khulna*
1	Hope	South Labanchara	PL	24
2	Seven	Harinatala		15
3	Silent			13
4	Faith	Chakrakhali		24
5	August	Jhardhanga		6
6	Rose		GL	14
7	Lilly	Bahsbaria	PL	6
8	Honey		GL	21
9	Little		PL	6
10	Beauty			15
11	Lucky	Hogladanga		23
12	Pearl	Ghola		15
13	Delight	Koya	GL	13
14	Seventy	Mostofa Mor	PL	14
15	Grace	Bastuhara Road		14
16	Swan	Arongghata	GL	25
17	Charming	Krishnanagar	PL	8

Source: Authors' fieldwork 2014-15

[4] Urban elites have considerable influence over vacant government lands – see Barakat et al. (2001) for details.

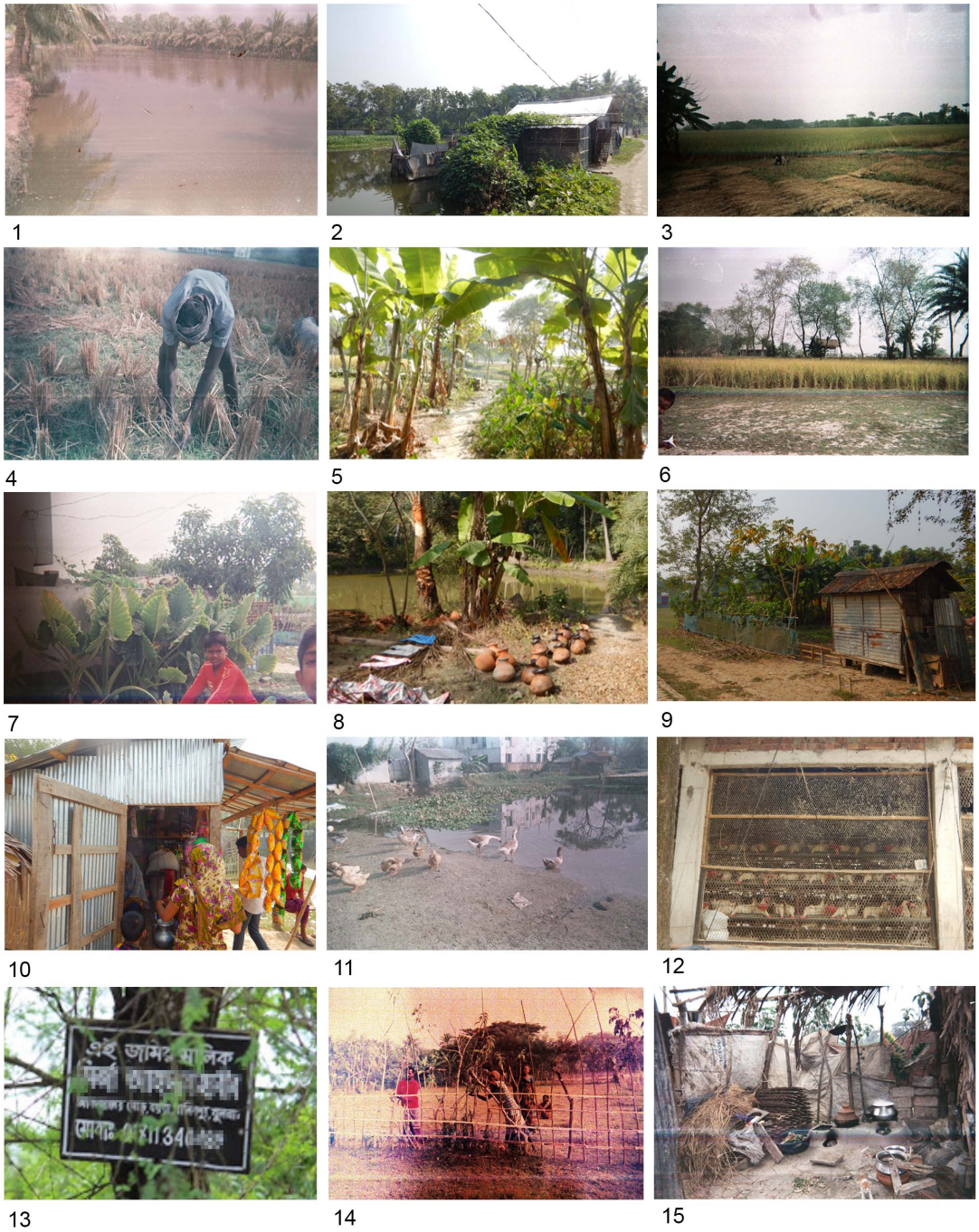

Figure 4.2: 1: Landowner's fish farm; 2: Honey's shelter; 3: Pearl's effort on the field; 4: Lily's husband in the field; 5: Banana plants grown by Virgin; 6: Paddy field looked after by Seven; 7: Taro plants grown outside the corner of Seven's house; 8: Date juice collected by Little's husband; 9: Silent's retail outlet at the edge of her patron's land; 10: Swan's road-side retail outlet; 11: Rearing ducks in shared arrangements; 12: Landowner's poultry farm; 13: Ownership signage stating owner's name, residential address and phone number; 14: Pearl and her family fixing fences; 15: Seven's kitchen

Following Dowling et al. (2016a; 2016b), we recognised the need for novel techniques to tackle the overlapping complexities of researching non-human agencies in marginal settings. We followed a participatory photography approach called 'photo-response' (Alam et al., 2018) to explore home-making practices and politics. Participants took photos, explained the photos and mapped the location of photos to explain how they negotiate and maintain these informal homes. The contribution of non-human agencies within the patron-client relations became explicit after the 'inductive analysis' of data (Creswell, 2012). The photographs and texts where fed in NVivo and categorized into different 'nodes'[5] (e.g. power relations at home, women' contribution at home, interaction with non-humans, feelings of home). Common themes were developed under individual node. Some of the themes informed layers of politics from the ground than being interpreted by some pre-given theoretical constructs. Based on the participants' interpretation of their photos (some are presented in Figure 4.2), three distinct processes emerged as prominent political strategies: *complying*, *transgressing* and *reimagining*. We discuss these themes in the remainder of this paper, using them to describe the more-than-human politics informing migrant negotiations of home.

More-than-human politics in Khulna's fringes

Patron-client relations typically involve "the dependency between a powerful patron who uses the influence and resources to provide security for a less powerful agent in return of personal service, support and loyalty, that in turn legitimises the

[5] The term 'node' is central to understanding and working with NVivo. Related materials are gathered under each node to look for emerging patterns and ideas.

power of patron" (Scott, 1972:92). However, our findings reveal that non-human agencies of urban land constantly disrupt and redistribute the 'political' beyond the presumed patron-client linearity. Land reorients both its owner and occupier to inform reciprocity as well as vulnerability in unintended ways in which none of the human subjects holds complete power and control. In the following sub-sections we explore three more-than-human political moments – complying, transgressing and reimagining – through which absentee patrons and migrants negotiate their respective 'matters of concern' (Latour, 2004b: 24) with one another and with non-human others.

Complying

Homes are accessed through negotiating compliances which shape the politics and tactics of homemaking (Bayat, 1997; Power, 2017). In the case of Khulna, an initial strategy for securing home required negotiating a set of informal expectations that guided prospective relations with plants and animals on a patron's land. Access to a low-cost landowner-built shelter in one corner of the land is verbally and materially secured once agreement is reached. Honey, a female household head, explains how she started and continues with her present home.

> "We take care of the fishpond (Figure 4.2.1); we feed the fish. In return, the landowner released some land in the corner of the plot to us to stay. He also erected the house (Figure 4.2.2). We even do not need to pay any rent. [...] We planted some vegetables in the unused corners to feed

> ourselves but we are never allowed to touch his fish. We can only feed them, but they are never our food."

The quote illustrates that non-human agencies, in this case the fish and fishpond, play critical roles in initiating home. Complying to non-humans is critical, irrespective of whether the homes are on privately owned land or on government land adjacent to the private proprietor. Absentee patrons live far away from these places, sometimes abroad, and need someone to secure the land and generate land-based products. The rural migrants look after the land, including the non-human animals and plants. In exchange, some unused or underutilised land is selectively sanctioned so that the occupier can live on subsistence, in most cases, free or at minimal cost.

Participants need to meet a set of compliances. Firstly, potential occupiers' past skillset (of farming) and present interest in engaging in the field are key criteria. August recalls how she ended up with the present landowner,

> "The landowner was looking for someone *reliable, experienced* and *interested* working in fields. We had previous acquaintances in this area through my sister's marriage. My sister's in-laws introduced us to him. The landowners do not visit that much; if we are known to someone known to them, it is easy for them to stay far away."

Secondly, potential occupiers' identities, skillset and poor socio-economic status need to be endorsed by someone trustworthy to the landowners. Another homemaker, Lily responded,

> "A university staff [member] from our village introduced us to the landowner endorsing our experience in the field… Our introducer also assured that we were not thugs or hoodlums, […] in his absence, *weak villagers* like us would not snatch his land and crops; moreover, we would leave without a single word when the owner wished."

The occupiers' marginal social and economic status is critical in establishing the patron-client relations as it makes them more vulnerable and therefore manageable according to landowners' wish.

After entering into a relation with the landowner, the homes sustain as long as the 'multi-species labour' comprising of non-human plants, animals and the human occupiers continues and the labour continues to meet the patron's expectations. Barua (2017) explains the non-human induced labour as the productive activity of animals, performed through a range of 'carnal and ethological registers' (p. 280), and are enacted in the presence of others (human or animal) whose own performances are important in creating meanings to the labour. Pearl's performances in the field can be thought of as a multi-species labour,

> "The harvest (Figure 4.2.3) needs a lot of work: cutting, collecting, mowing, gathering, sorting – the works just do not end. After a while, we shall plant lentil, then turnip. The landowner has a particular expectation of his land. He has invested much money to purchase this chunk of land so close to the city. He must secure his return. And if we are to live here, we need to work for their return."

Occupiers nurture crops from the seed to the harvest. Seven cautions,

"…they (the harvests) need to look healthy..."

Otherwise, with a reduced return from the field, the carer's existence on the land is at risk. Seven's brief quote portrays an uncertain home. Despite years of experience and hard work on the field, at times dwellers struggle to meet landowner expectations. As Lily mentioned,

> "The arrangement is convenient if you can find a good landowner and we know how *things* work on the field [pointing to her husband's work in Figure 4.2.4]. Still, the problem is if you can't turn in something from the field every two or three months, better prepare to see their annoyed faces."

These multi-species performances are time-bound as after months of labour when it is harvesting time, restrictions are imposed and occupiers need to temporarily withdraw from the multispecies 'contact zones' (Haraway, 2008:4,35) until the landowner reaps the harvest. If occupiers desire to consume some of the produce, they can only continue after confirming the landowner's returns and with the landowner's permission. As Virgin explained,

> "All the fruits are taken to his townhouse. If there are five bunches of banana (Figure 4.2.5), it is hard to give them all, because we have kids. In the past, I would let my children eat them. Now I do not allow. This

year, I did not touch a single thing. Still it is hard to win them [the landowner]…"

Non-human agencies on land bind the patron and occupiers together as these agencies are central to the formulation of patron-client compliances. When occupiers can work with non-human agencies to meet landowner expectations they become more secure, whereas unruly non-human agencies, such as a storm or a poor harvest, can subvert these relations and expose occupiers to evictions. A storm or poor harvest can put the performance of the sheltered subjects under the patron's scrutiny, which with time may weaken the patron-client bondage. Nevertheless, these instances highlight the ways non-human agencies influence the relations among human actors where the human agencies lack control. Yet with all these turbulent politics of compliance, the multispecies labours continue and is often oriented around the patron's imagined productive outcomes.

Transgressing

Studies show that non-human agencies often contribute to territorial politics of home simultaneously through border-making and transgressing of borders (Power, 2009; Head and Muir, 2006).[6] In this section, we discuss how non-human agencies become embedded in expressions of power in creating imagined and material borders

[6] See Power (2009) for non-humans e.g. possums transgressing homes' borders. Head and Muir's (Head and Muir, 2006) work on garden shows that homemakers' selective interaction with non-humans rupture the diverse imagined and material borders of home through the politics of nature-culture, nativeness-non-nativeness, indigeneity-non-indigeneity, etc.

of homes, whilst also enabling participants to transgress these borders and negotiate new spaces.

Figure 4.2.6 displays a seemingly ordinary photo of the half-harvested paddy field, however, it is a powerful representation of the ongoing material border-making processes of home, as Seven describes-

> "The lush green in the photo (Figure 4.2.6), attracts you, the city people; in them you see a symbol of productivity; we labour for that productivity, however, in the end they come to be productive for someone else – for my landowner, not for me. Only after the harvest we forage empty lands (the bottom half of Figure 4.2.6) for left-over dry roots."

For participants, the presence of standing crops in Figure 4.2.6 is a material reminder of the patrons' ownership and claim over land as well as the limits of the occupiers' homes. After the harvest, the leftovers can be accessed as the reward for occupiers' contribution. August describes everyday boundaries she negotiates,

> "The landowner bought us some mango saplings. I planted them. I planted all these – mango, coconut, berry, star apple, and guava. They will bear fruit in a while. When it is the right time I shall call the owner, I shall pick the fruits in his presence. He would share some if he wishes

> depending on his mood on that day. Sometimes we consume the fallen ones. But, we are not allowed to touch anything above the ground."

Access and restriction to non-human plants and animals, their growth, presences and absences reinforces patron-client power relations and shapes the imaginative borders of home. Participants generate abundances on land through caring, but not consuming. Through selective exposures and restrictions to non-humans, participants are constantly reminded of their roles and vulnerabilities, and where formal ownership lies.

Although access to shelter is confirmed by meeting the spatiotemporal compliances of touchables and untouchables, consumables and controls, the compliances negotiated with landowners are rarely enough to sustain homes. Dwellers need nourishment to survive and to maintain the bodily ability to labour to meet their patrons' expectations. Some food can be sourced from the land according to different agreements, but not enough to feed a family year-round, inviting transgressions of agreed patron-client relations. Due to their poor economic capacity, dwellers rely on the fringe ecologies that exist outside land boundaries.[7] Seven describes,

> "Sometimes, during the high time of harvest, we do not even have time for our families. Our children have to rely on whatever is readily available in the neighbourhood. Say, these taro plants (Figure 4.2.7) are always outside the corner of the land. Nobody planted them nor are they lucrative to my landowner. They are free and good sources of nutrition.

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[7] Some male household heads occasionally travel to towns for income – an aspect outside the fringe ecology is not covered in this paper.

> You can't have them living in slums. Without them we would have starved."

The consumption of taro and its unconditional availability in the fringe ecology provide necessary 'affordances' (Gibson, 1979: 127; cited in Ingold, 1986: 2)[8] to these homemakers to maintain wellbeing.

Dwellers, the female household heads transgress or rupture patron-defined borders as they collaborate with neighbourly non-humans situated off site. The affordances developed through broader more-than-human relations challenge existing power relations with patrons – as off-site negotiations are not regulated by the patron. The economic opportunities develop based on the ownership or relationships with non-humans and the skills and labour invested for nurturing these non-humans. Through collaboration and creation of these economic opportunities based on non-humans, neighbouring women negotiate communal spaces by stepping outside the patron-defined boundaries. The ruptures are not only material but also imaginative, as these women enjoy some degree of financial freedom through a reduced reliance on their husbands' income. Going out of the physical home also ruptures the cultural prejudices that often tend to confine these housewives within the physical home. The household head Little describes a community economy of sharing,

> "We rear ducks in a shared arrangement. The neighbouring sister lent her hen to us. We do not own them. Among eight chicks, we are entitled to enjoy half. The eggs will be divided equally. My husband prepares

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[8] Affordances are a set of possibilities. The same object would afford quite different things to different individuals (Ingold, 1986: 2).

> the date trees for juice; this winter he is doing 50 trees in the neighbourhood; out of the whole week's juice collected, one day's collection will reach our home (Figure 4.2.8)."

While landowners impose control over particular fruits, plants and animals, the occupiers' engagement with non-humans transgress or flourish outside fixed boundaries. Ruptures to landowner control can take many forms, such as rearing ducks and chickens in shared arrangements, growing catfish in waterlogged roadside holes during the rainy season, collecting snails and crabs from neighbourhood canals, collecting fallen branches in the neighbourhood for fuel-wood, digging clay from the sun-dried canals to repair the outdoor hearth, and shifting the hearth and fuel woods to the road during prolonged rainfall. It is in these more-than-human negotiations that dwellers build skills, knowledge and resources that are independent of their patrons' interests.

Over the course of time, these transgressions can take more visible and material forms such as when female household heads pursue small retail initiatives at the edge of their patrons' land. Small shops (Figure 4.9-10) are initiated to sell the products produced through multi-species labour. Eggs, fish, vegetables and spices are sold in the shop. Live chickens or ducks are sold or sometimes, exchanged. Non-humans circulate through these retail shops and sustain the subsistence economic practices. These activities involving non-humans boost economic opportunities, strengthening the ability of households to secure their homes. However, these more visible ruptures involve significant risks as they may fall outside the compliances negotiated with landowners. Silent describes,

> "I started this shop (Figure 4.2.9) a year ago as an extension of my outdoor kitchen. I can cook in the back and run the shop in the front. I sell my share of chickens, eggs, cow dung sticks. I also cook meals if there are many day labourers around; they are good customers during lunchtime… But I do not run the shop when our landowner visits. They fear of losing control over his land and us. They are not comfortable to see us *dropping our roots* to the land."

Tangible ruptures such as these retail outlets built by occupiers convey a sense of permanence that potentially breaches core patron-client compliances. These may not be seen as innocent acts of subsistence by vulnerable migrants but as acts of transgression by landowners. Despite possessing legal rights to the land, landowners tend to feel vulnerable about losing control. Occupiers can be cautioned against such transgressive acts. However, the dwellers often enact a more-than-human politics that shield their activities from landowners, creatively drawing on multi-species opportunities as emancipatory tactics to thrive in fringe ecologies. Swan recalls,

> "I had to stop. Our landowner told my husband that we were inviting outsiders on his land. In a way, we were breaching the agreement by doing the shop. But you know, we have to survive. So, I moved the shop further outside, across the road (Figure 4.2.10). The kitchen also moved with the shop. We are just two mouths at home, so, not a problem for us. Well, the owner will still give that suspicious look when passing by."

Despite patrons' increasing discomfort, vigilance and cautions, the transgressions continue through the mobilisation of plants, animals and their extracts.

Sometimes this means transgressive acts are located away from the patron's lands creating spaces for occupiers to come together and strengthen relations through more-than-human economies. The risk is that they no longer appear as displaced '*weak villagers',* which was a key to compliance in (negotiated) patron-client relations. These collaborations may be seen as a threat to power relations by the patron, while for the participants they are creative ingressions, an essential means of maintaining home in dynamic marginal circumstances.

Reimagining

Environmental imaginaries shape meanings and attachment to places to inform human political motives (Peet and Watts, 1996; McGregor, 2004). In the current case, non-human agencies have enabled migrant dwellers to reimagine themselves, not as vulnerable clients, but as more empowered carers and members of more-than-human communities. Studies have established that non-human agencies embedded into dwellers' everyday lives reinforce imaginaries of wellbeing and feelings of belongingness to home and surrounding urban space (Wilkinson et al., 2014; Mazumdar and Mazumdar, 2009). This was also evident in our study where despite controls and restrictions imposed by landowners participants find comfort in living with plants and animals. Participants were pleased they were at the city margins as evident in Charming's quote,

> "Sometimes we sit and think, without these places where would we go? […] Many of us entered slums in cities, but not everybody can survive there, or make out in those city-type jobs. Some then step back to these places. There are opportunities although there are difficulties. Here I can

> rear some hens and ducks (Figure 4.2.11), my children can have vegetables, if lucky enough, some fruits. […] My husband can have a sound sleep away from the hustle and bustle of the city."

Despite restrictions and uncertainty, opportunities emerge through the availability of plants and animals. Such opportunities align with their agrarian past, making these spaces reasonable destinations to settle in, where non-human collaborations help them 'cultivate home' (Bhatti and Church, 2001). As Wright (2014:10) argues belongingness grows through a "set of practices and processes rather than a status that one might have".

In her study of migrants' homemaking in New Zealand, Longhurst (2006: 589-590) argues that even the mundane practices of cooking can establish imaginative connections between migrants' present domestic spaces and old ones, and help bodies viscerally develop homey feelings. For our participants, through more-than-human collaborations matched to their skills and interests, they 'co-become' (Bawaka Country et al., 2015) with the land and remain hopeful. Beauty reimagines her new role in this fringe ecology,

> "Sometimes we feel like, we are the *chosen ones*; we do not own land. Our landowner does not live in this land. We were chosen to look after the things (poultry in Figure 4.2.12) invested on land; in exchange, we earn the advantage to stay in one corner, it is a kind of ticket, you know. We have been in this way for the last 15 years."

Beauty's awareness of her role within the landowner's piece of land and her right to those privileges she 'earned' through her labour and care for the land is critical

to her negotiation of home. Neither any legal rights nor any formal urban institutions confirm her home. Rather, a material shelter is secured firstly, by negotiating a set of compliances; and secondly, by both meeting and exceeding these compliances. However, whether the material shelter could be called home depends on the establishment of sufficient 'affect' and 'coherence' through the presence and performances of and with non-humans. Hope explained her imagined sense of belongingness within this precarious existence,

> "They (landowners) think that they let us stay here. Sometimes we laugh silently seeing both the tensions and affections of these unhappy people for their land [showing landowner's ownership signage in Figure 4.2.13]. But, you know, we are so happy. To be honest we do not much feel poor until they visit us. When we are in the field, we feel so accomplished. I do all the works; for a while I start to believe that these are mine, the land listens to me, not someone else miles away only living by papers [legal documents]."

Hope's quote resonates with earlier works arguing that intimate engagements with non-human landscape can reinforce the recognition of the 'self' (Lea, 2008:96) alongside the multiple 'ways' of 'belonging' to places (O'Gorman, 2014:285) as well as reinforcing 'political subjectivity' (Wood and Young, 2015). Their political positioning as marginal creates opportunities to access land, however with time the migrant dwellers have developed different more-than-human place-based political subjectivities. By negotiating care, control and collaboration with humans and non-humans feelings of hope, happiness and accomplishment can be cultivated. The imagination of being at home and the realities of struggles to secure a home intersect in

forms of emerging 'co-becoming', resonating Ingold's (1986:2) proposition that a place (*environment* in original text) can only be defined relative to the beings that occupy it. Pearl explains her renewed recognition of self as well as the mutual benefit derived from her presence on the owner's land,

> "If we were not here, this land would be a haunted place. It could be robbed ages ago. There are vultures eyeing on these types of land. We take care of their fences (Figure 4.2.14). But sometimes life is harsh, we need to evacuate on short notice. However, we do not lose hope. We need them as much as [they need us]; without us neither can survive."

Pearl's quote indicates a conscious recognition of the mutuality of the patron-client dynamics expressed in her contribution to the patron. It exposes the vulnerability of patrons who own a piece of land yet are absent from it. Occupiers help reduce this vulnerability. However, the sense of mutuality diminishes when these land parcels need to be disposed of according to the patron's interests. Dwellers face eviction and homes can be destroyed because of exchanges of ownership in faraway places. Yet, the homemakers' unique capacity to engage with land lets them remain hopeful and active. The possible availability of a similar role on another owner's land bolsters them with the courage to exist year after year with uncertain tenures, as explained by Seven,

> "... There are other people like us around within a mile. Most people you see around, all are like us…. all are temporary. If tomorrow we are asked to evacuate; we shall have to walk away leaving all these (Figure 4.2.15) behind…"

Seventy added a positive note,

> " … in the beginning, we used to live in fear of eviction... counted on days. In due course, we realised that changes are unavoidable. The ownership of land changes; nor can we stick to the same landowner indefinitely, but it is always the same land we live with."

Pearl added a completely different shade,

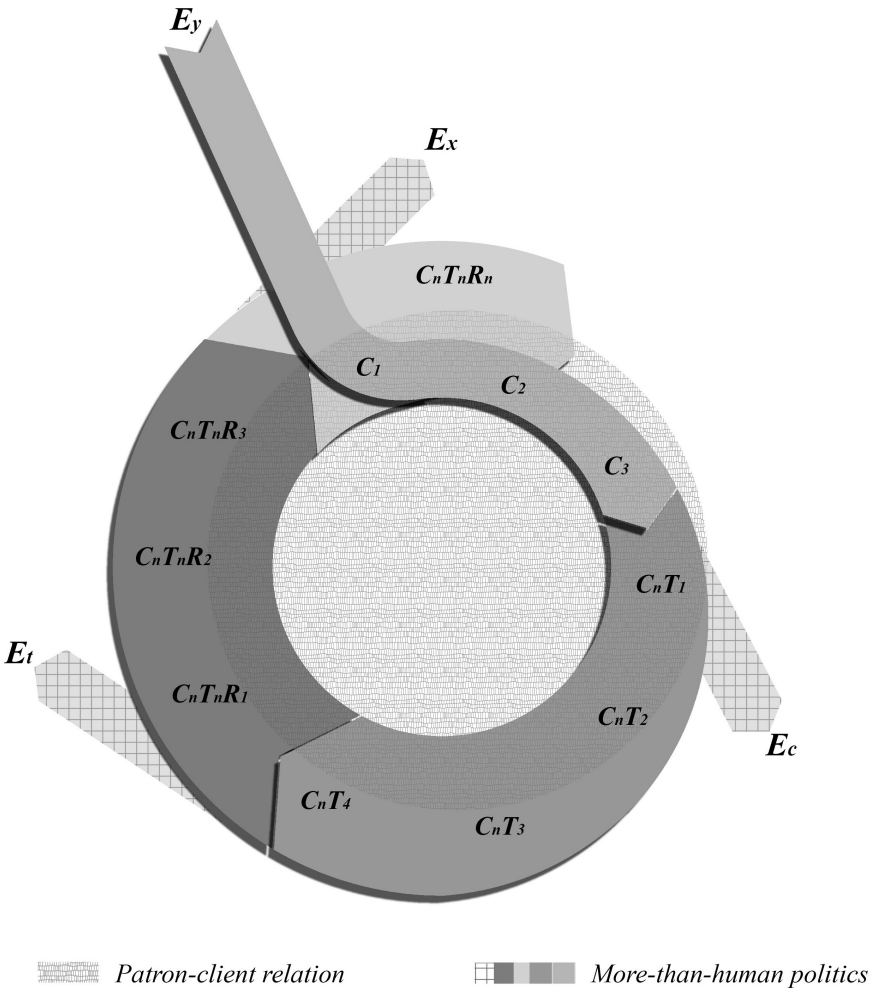
> " […] If I don't feel comfortable with the landowner, I shall move to another one. This is rather an opportunity. But I shall stay in this area."

Quotes from Seven, Seventy and Pearl reverberate courage and hope. These are communities that have developed unique capacities to engage with non-humans as a means of negotiating the politics of patron-client relations. In some ways they enact more-than-human subjectivities, forming diverse politics of becoming with the land and landscape, in which humans and non-humans are enlisted in the political project of homemaking and belonging. For these communities, "there is no pre-existing home… to be belonged to; rather performances, practices and affects re(make) the world together" (Wright, 2014: 12).

Discussions and Conclusion

The goal of this paper was to explore the politics of patron-client relations amongst client communities on the fringes of Khulna city in ways that extend beyond the human. The anthropocentric focus of most planning and political research obscures the many non-human agencies that shape, sustain and challenge such relations. Reframing traditional politics as 'anthropolitics' provided opportunities to distinguish between more recent work on more-than-human politics, and identify the more-than-

human collaborations that shape the politics of homemaking. We identified acts of complying, transgressing and reimagining (as summarised in Figure 4.3) as more-than-human achievements, enabled by non-human agencies. In this section, we visualise and discuss the significance of this approach.



E_y - Agreeing to enter into patron-client relations
C_1 - Complying through skills and interest to engage with non-humans (e.g. fish)
C_2 - Complying through multi-species labour (e.g. planting, farming)
C_3 - Complying with spatio-temporal restrictions on plants and animals
E_c - Eviction from land due to non-compliance and looking for new relations
T_1 - Imagining border-making through restrictions on non-humans in patron's shelter
T_2 - Unintentional ruptures through procurement of non-humans (e.g. Taro plant)
T_3 - Irregular ruptures through sharing economic opportunities (e.g. poultry)
T_4 - More visible transgressions (e.g. starting shop)
E_t - Eviction from land due to transgression leading to patron's discomfort
R_1 - Reimagining home through lifestyle choices similar to those of past homes
R_2 - Recognition of capacities through presences and perfomances on land
R_3 - Belonging to the land and learning to live with uncerainty
E_x - Exiting from the present relation if not suitable and entering into a new one

Figure 4.3: More-than-human politics through complying, transgressing and reimagining

Using the patron-client relation as a springboard the Khulna migrants access (E_y) urban land and the non-human agencies of land. Collaborations with plants and animals instill vital political agencies to situate these migrants with 'bundles of power' (Ribot and Peluso, 2003: 173) through which they overcome their lack of 'formal rights' to urban land. They appropriate habitable spaces simultaneously through complying to (e.g. C_1, C_2 and C_3) and contravening patron-client dynamics (e.g. T_1, T_2, T_3 and T_4).

The migrants' wellbeing, lifestyle and sense of belongingness (e.g. R_1, R_2 and R_3) are sustained as fringe ecologies help to integrate their past experiences, skills and their present aspirations to thrive in cities [or the city fringes]. With time, they begin to feel that they belong with these fringe ecologies, which become home.

Complying, transgressing and reimagining (C_n, T_n *and* R_n) concurrently occur as tactics of existence until eviction. Despite the risk of evictions due to non-compliance and transgression (e.g. E_c *and* E_t), these communities have become relatively ambivalent about their marginalised status. They take care of the land as if the land takes care of them in return. Homes "come into 'being' through an ongoing process of be(com)ing together" with the land (Bawaka Country including Sandie Suchet-Pearson et al., 2013: 185, 186). Through the creation of 'shared subjectivity' with non-humans, migrants strengthen their position in relation to landowners; if not comfortable within one arrangement, some suggested they would voluntarily leave and build new relations in another space (e.g. E_x).

The findings have both practical and theoretical implications. In Khulna, migrants' more-than-human politics of home generate "dynamic effects, they

complicate political economies of accumulation and the violence attending them" (Barua, 2017: 275). The entangled non-human migrants' politics do not only secure migrants' specific needs in urban spaces, but also sustain the dominant logics of patrons, property and the urban-rural dynamics in an expanding urban region. These non-human induced politics also have explicit gendered dynamics. Through more-than-human relations migrant women find ways to navigate spaces beyond the confinement of home often demarcated by the patriarchal cultural prejudices in the context. Through instances of transgression, home and work become synonymous and have liberating effects for these women. It is essential that urban theories recognise the 'liminality' (Gandy, 2011) of these informally produced spaces as crucial sites for unsettling dominant spatial relations of power and justice. We argue that greater attention to the embodied and affective more-than-human politics can overcome absences experienced by informal communities (refer to August's claim, "they behave as if we never existed") experienced by informal communities and lead to more inclusive institutional and planning responses. More-than-human approaches to marginality can contribute to knowledge and practices oriented towards sustaining and improving marginal lives and challenging relation of domination.

Secondly, through highlighting the political agencies of non-humans and their more-than-human subject forming capacities we call for further theorisation of non-humans in politics of political ecology and, specifically, urban political ecology. We agree there is a need to engage with the growing more-than-human literature, 'to do more' (Dowling et al., 2016b) to go beyond anthropocentric political discourses that tend to dominate in political ecology and "retheorise development in creative and more-than-human ways" (McGregor, 2017: 350, 353). Our findings highlight that uneven

human social conditions (such as patron-client relations) are produced and performed through socio-natural – not just social – spaces. Non-humans induce critical political agencies as do the human social conditions of gender, class, race and ethnicity – creating hybrid more-than-human political subjectivities. Khulna's fringe ecologies embody 'socio-natural relations' through multi-species collaborations that are accessed through social conditions of marginality. In these urbanising fringes, natural heterogeneity (non-human animals and plants) and social heterogeneity (the urban elites and homeless migrants) are enmeshed together. By going beyond anthropolitics it is not only possible to better understand how migrants like August exist in cities but also to imagine and pursue an emancipatory politics attuned to the subtleties of more-than-human life. We support recent work calling attention to nature's 'lively materiality' in shaping the social and political (Barua, 2014) and to move beyond exceptionalising humans (Srinivasan and Kasturirangan, 2016). Such ontological sensitivity can supplement multi-species urban living with alternate, emancipatory and hybrid possibilities.

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Chapter 5: Imaginaries and materiality of home

Background

Chapter 5 furthers understanding of migrant homes by answering the sub-research question: what are the imaginary and material dimensions of home informed by more-than-human relations? In order to analyse homemakers' relations with non-human agencies, I adopt the concept of 'imaginaries' (Peet and Watts, 1996; later worked by McGregor, 2004). Imaginaries enable a context-specific understanding of how different cultural groups relate to their surrounding ecologies and create meanings through practice. Through photo-response, seventeen household members revealed aesthetic, spiritual and economic imaginaries of home that inform their domestic maintenance and materiality. The findings reinforce the influence of non-human agencies in shaping the home by highlighting that even the spaces that are traditionally perceived as negative, such as back alleys or the boggy strip of space beside the kitchen, contribute to marginal living through creating opportunities for meaningful human-non-human encounters.

These human-non-human relations extend outside the physical house, with external spaces become integral to homemaking in marginalised contexts. The analysis of the chapter significantly contributes to understanding of homemaking practices through the lens of more-than-human imaginaries.

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Co-authors' contributions

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Neither sensibly homed nor homeless: Re-imagining migrants' home through human-nature relations

Abstract

Human-nature relations informing practices and places have gained much attention in the study of home and homemaking. We contribute to this growing literature, but in contrast to much research on the Western modern homes we focus on informal homes on the urban fringes of Khulna city, Bangladesh. To explore migrants' dwellings outside stereotyped spaces, such as the slums in Khulna, we call for an alternate more-than-human approach suggesting that all temporalities and materialities are co-constituting through and lived with human's situated relations with non-human nature. We describe these relations as more-than-human imaginaries that bring together human-non-human bodies and contribute to the conditions and capacities of homemaking. We have identified three dominant imaginaries: aesthetic, spiritual and economic, through which homes are produced and maintained by translating rural migrants' agrarian identities, belief systems, livelihoods and lifestyle in cities. The imaginaries inform the material dimensions of migrant home-ecologies in unconventional ways, connecting both domestic and non-domestic spaces through the embodied flow of human-non-human relations. We conclude that reimagining non-humans as co-constituting home unfolds the diverse strategies and experiences of marginalised communities and their socio-ecological complexities in urban space. Hence, cities and their uneven metabolic processes can potentially be conceptualised by thinking through the more-than-human margins of the non-West.

Keywords: Bangladesh, urban informal settlements, climate migrants, human-nature relation, home and homemaking, more-than-human

Introduction

> … We are neither homeless nor does our home make sense to them … we are caught up in this way for the last 14 years. […] They would rather be happy to see us in slums of Khulna city, or back at villages from where we came… we are dwelling in the middle, at times it is uneasy for them. – (Rose[1], household head, age 36)

A range of comments such as the one quoted above expresses the dismay and mistrust felt towards local leaders and government officials by research participants living on the fringes of Khulna city, Bangladesh. These migrant families live a precarious existence with no land titles or rights to land except verbal consents from absentee landowners. Rose claims that even after living in this way for 14 years her home does not make sense to the designated planning organisation.[2] Her existence in this part of the city outside slums is undesirable, if not challenged, leading her to further social, political and economic marginalisation. The lack of recognition of these communities is neither accidental nor deliberate, but is a problem of framing in which migrants from rural areas are expected to enroll in particular urban spaces, such as

[1] Participants' original names are changed to retain anonymity.
[2] Parvin et al. (2016: 88) and Sowgat et al. (2016: 12) discuss the limitations in existing urban governance preventing city managers from favouring informal dwellings in Khulna context.

slums.[3] While many do move to these densely populated areas, in this paper, we focus on migrants like Rose, who settle in urban fringes. For these migrants, homes are secured through everyday interactions with non-humans[4] and the diverse opportunities emerging from fringe ecologies rather than the formal documentation of distant planning authorities.[5] Understanding how these homes are imagined and materialised can help valorise migrants and their existence in the margins of Khulna city.

The paper aims to explore the meanings and material dimensions of migrants' informal homes that are imagined and produced through everyday interactions with the non-human agencies in Khulna's urban fringes. We do this by approaching homes as places with multiple imaginary, experiential and material dimensions (Blunt and Varley 2004; Domosh 1998; Tuan 2004) that are "highly fluid and contested sites… of entanglements of nature and culture, and of human and nonhuman agency" (Blunt 2005: 512). Our approach is informed by the more-than-human literature which has shown that the material home is much more than a solely human construction and has highlighted the capacities of non-human agencies in shaping domesticity (Dowling and Power 2013). By re-imagining the human home through underlying human-non-human

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[3] Hakim (2013) mentions the limitation in framing the 'peasant-turned-migrant' communities in Khulna city; there is no term used in *Bengali* with a similar meaning as that of 'rural migrant'. All migrants in Khulna city are generalised as *'Basti-bashi'* meaning 'slum-dwellers'. Occasionally they are also described with reference to their regional origin.

[4] By non-humans, we mean different living and non-living entities and objects, such as plants, animals, leaves, water, etc. With a more-than-human approach, non-humans are considered having agencies to influence human conditions and practice.

[5] The ongoing extension of Khulna city to its surrounding non-urban landscape was approved in the Khulna Master Plan 2001 (KDA 2002). The Detailed Area Plan 2014 for Khulna city's extension under KMP 2001 was completed in 2016, but is yet to be gazetted. Currently, all planning decisions are made with regard to this plan. Unfortunately, the existence of landless rural migrants in Khulna's urbanizing fringes is absent in these planning documents. This omission in policy documents is perpetuates an absence of the planning decisions necessary to address issues surrounding migrants and their adaptation in the city fringes.

relations (Hitchings 2004; Power 2008; Shillington 2008) researchers have explored the diverse 'less-represented' (Lorimer 2005) aspects of domesticity. More-than-human concepts assert that all temporalities and materialities are co-constituted through human dwellers' 'situated relations' (Gane 2006: 147) that are 'lived with' the non-human world (Haraway 2003: 5). 'Thinking through' these relations may offer "an attentiveness to the rich array of senses, dispositions, capabilities and potentials" (Whatmore 2006: 604)[6] of non-humans to inform what is often taken for granted as humanised spaces. In our study, we take human-nature relations as the 'vantage point'[7] to explore the less familiar dimensions of home that contribute to the production of habitable spaces in cities.

Our focus is on marginalised communities in Bangladesh, providing a counterpoint to the majority of more-than-human research on homes, which is dominated by those working in western contexts. The relations examined in Western homes are in relatively 'stable' settings where home is already normalised and managed by stringent regulations created by formal organisations, such as local councils and owners' corporations. In those 'modern home'(s), non-human nature (e.g. plant, animal and water) is encountered after some levels of abstraction, such as pest control or water filtration (Kaika 2004). In contrast, on the margins of Khulna city, our study participants' homes are fluid and less regulated, partly due to the lack of formal rights to land and tenure security. As will become clear human-nature domestic relations

[6] See Whatmore (2006: 603-4) for the opportunities of 'thinking through' non-humans towards practicing the more-than-human concept.
[7] With the term 'vantage point,' Haraway (1997: 269) proposes to embark on a 'privileged perspective', but from non-standard positions that are able to illuminate more-than-human lived realities.

differ dramatically from well-managed yards in English homes (Bhatti and Church 2001; Hitchings 2003), or suburban backyard gardens in Australia (Gillon 2014; Head and Muir 2006, 2007; Power 2005). The imaginative and material blurring of nature and culture, private and public, domestic and non-domestic occurring through migrants' homes in Khulna emphasises the importance of more-than-human relations in diverse and dynamic non-western contexts.

In what follows, we first develop the concept of more-than-human imaginaries as a key analytical theme for exploring migrants' homes. More-than-human imaginaries are positioned both as reasons and consequences of human-non-human encounters that contribute to practices and the production of homes. We then introduce the study site and the migrant communities living informally at the fringes of Khulna city before briefly outlining the photo-response methodology used. Our findings draw on photographs taken by participants to detail three prominent imaginaries circulating amongst the migrant communities – aesthetic, spiritual and economic — which have shaped the intangible and material dimensions of home. In the summary sections, we emphasise the importance of taking a more-than-human approach to understanding homes in marginalised settings where non-humans play a more emancipatory role in everyday negotiations of habitable spaces. Decentering the human offers important insights into marginal inhabitants' socio-ecological adaptation to urban spaces and can build on inclusive socio-natural futures of our cities.

Imaginaries of home

Research in feminist and cultural geography has highlighted the importance of imaginary and material dimensions of home (Blunt and Dowling 2006; Blunt and

Varley 2004; Law 2001; Meah and Jackson 2016). Blunt and Varley (2004: 3) suggest that the ideas or imaginaries of home, are permeated with 'feelings of home.' Researchers have examined different imaginaries of home, especially gendered ones, that describe the complexity of social relations and feelings intersecting home. The relations inform particular ways of understanding domestic spaces and practices. For example, the material space of the kitchen has evolved through innovation in culinary technologies and practices and provides narratives of women who have been able to benefit from those innovations or who became further marginalised through the burdens of cooking and feeding their families (Meah and Jackson 2016: 528). Alternatively, Walsh (2011) documents migrant British citizens' homes in Dubai, and the contribution of diverse material practices, such as the display of a trophy, the creation of a soundscape, or the choice of rugs in the living rooms informing their masculine identities and social relations within the diaspora.

Not all the spaces that imbue imagination of home are necessarily contained within the material home. Blunt and Dowling reason that the feelings, ideas, and imaginaries of homes are intrinsically spatial, relating to context, extending across spaces and scales, and constructing and connecting to places (2006: 2). Their work implies that belongingness to home can be imagined and felt in multiple places and in this way, new spaces outside the physical home can be re-produced and appropriated with a sense of hominess. A classic example is the reproduction of Filipino domestic helpers' economic labour in Hong Kong to secure their material home in the Philippines (Law 2001). Every weekend these migrants reclaim Hong Kong's public spaces and through the consumption of ethnic food and mixing with other Filipinos they are able

to create an ambiance of home viscerally transcending "the scale of the body, the city and the nation" (Blunt and Dowling 2006: 27).

Feminist studies, aligning with post-humanist philosophies, have further extended the human home's imagined and material relations with non-human nature within and outside of home (Hinchliffe 1997, 2003; Kaika 2004). These studies reconfirm that the material production of home relies heavily on the human dweller's engagement and appropriation of non-human nature, including natural processes. For example, the dwellers' relation to natural light, water, and plants is part of an imaginary directed towards visual comfort, cleanliness and psychological pleasure, informing consumption practices and shaping the physical characteristics of home (e.g. sunrooms, swimming pools, gardens) (Atkinson 2003; Bille and Sørensen 2007; Head and Muir 2007). Other work highlights the home as the site for human-nature co-habitation (Franklin 2006; Head and Muir 2006; Power 2008) and confrontation (Power 2007; 2009a) in which more-than-human relations imbue the human dweller's familial satisfaction and sense of home and shape domestic 'routines' and practices (such as bird-watching, pet-walking or gardening). Subsequently, these relations influence the production of the material domestic space through the choice of physical house-form as well as the use and appropriation of neighbourhood spaces (Fox 2006; Power 2009b; Wilkinson et al. 2014).

Incorporating non-humans into imaginaries of home deepens understandings of homemaking in a variety of ways. The approach unsettles the latent anthropocentrism that positions human dwellers as the dominant agents constructing home by extending the scope of 'the *dwelling* subject' to non-humans (Longhurst 2001; 2003). The shift in subjectivity helps break free the categorical separation between humans and non-

humans creating opportunities of knowing home through the capacity of an "inter-subjective body communication" (Crouch 2001).[8] Studies on diseases, pests, plants and water discuss at length the bodily nature of homemaking practices and their material manifestations (Gandy 2006; Kaika 2005; Shillington 2008; Wolch 2002; Wolch et al. 2002). They suggest that human-non-human corporeal relations are able to communicate diverse meanings, qualities and capacities of co-habiting the world together; in Thrift's words, the 'heterogeneous associations' of bodies can bring together affect, motivation and skills in shaping meaningful practices on space (1996: 24).

We approach these more-than-human outcomes – the meanings, qualities, and capacities emerging from human-non-human relations – as 'imaginaries' that enable embodied practices as well as the materialities of home. Imaginaries, as defined in sociology, are the 'patterned convocations' of the social world that "provide largely pre-reflexive parameters" within which human beings imagine (and express) their ways of existence (Steger and James 2013: 23). Interpreting the concept through Ingold (1986: 2), we suggest that more-than-human imaginaries offer a set of 'affordances' of home: depending on the context, non-human agencies can afford entirely different things to different individuals; for example, a tree affords movement to a squirrel and places of rest to a bird.[9] We find the articulation of imaginaries by Peet and Watts (1996)

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[8] Crouch discusses 'inter-subjective body-communication' to describe how the individual's feelings of being together animate the material space through body-space encounters (2001: 62).

[9] Ingold (1986: 2), with reference to Gibson (1979: 127), suggests that the worlds, in themselves, make up a system and offer a set of possibilities or affordances to the surrounded individual. The same object, whether living or non-living, will afford entirely different things to different individuals, depending on the nature of their project: for example, a tree affords movement to a squirrel, places of rest to a bird.

[later worked by (McGregor 2004)] more relevant in approaching the more-than-human dimensions of home. They argue that imaginaries are "both social and natural, but not separate realms" (p. 37), instead imaginaries are forms of "situated knowledge that brings in nature and place as source(s) of thinking, reasoning, imagining" (p. 263) and "creating" the world (p. 267).[10]

Our study uses more-than-human imaginaries of home that bring human and non-human bodies into collaborations and influence the living conditions and capacities of home and homemaking. In the absence of formal recognition, it is these shifting imaginaries that contribute to the everyday production of homes and wellbeing in Khulna's urban fringes. As will become evident non-human agencies are central to aesthetic, spiritual and economic imaginaries of home: these imaginaries are vital to understanding how migrants create meanings and feelings of home and build adaptive capacities amidst uncertainty. Re-imagining non-humans co-constituting home sheds light on the diverse strategies and experiences of migrant dwellers and their negotiation of the socio-ecological complexities of urban spaces. The approach also provides a means to reconsider the strengths and potential of marginal populations in ways that contest negative stereotypes perpetuated in much urban decision-making and policy discourse.

[10] Peet and Watts (1996) propose 'environmental imaginaries' through which societies create systems of meanings that stem from material and social practices in natural settings and guide further practices (pp. 267-68).

Study area and methodology

The research took place on the fringes of Khulna city during 2014-2015 (Figure 5.1). The location was chosen due to its attractiveness to rural migrants. Khulna possesses distinct geographic importance for rural-to-urban and regional migration. It is the third largest city in Bangladesh and is the administrative seat of Khulna District and Khulna Division. The current Khulna Master Plan 2001 covers an area of 451.18 sq. km, which includes a large fringe area of 181.16 sq. km. (KDA 2014). The south-western fringes of Khulna city are prone to the most rapid urban transformation along major infrastructure developments, such as the Khulna-Satkhira Road and the city by-pass highway (Rekittke 2009). Land is a critical component in this area with land prices increasing 10-100 times in a decade due to its inclusion within the city's master plans although these are not yet fully implemented.[11] Recent national level initiatives to revitalise Khulna city as a regional centre have also contributed to this price bubble.[12] Outside investors dominate these fringe areas, replacing the original Hindu landholders.[13] The fringe ecologies are now the 'elite frontier' where absentee urbanites build land-bank and wait for the right time to sell the land or alter its use. While waiting, agricultural activities continue in these ecologies through small and medium scale investments in rice plantation, shrimp and sweet water fish farming and poultry and shrimp hatcheries. The rural attributes of these fringe ecologies attract landless villagers

[11] See Alam et al. (2016: 4-5) for the recent trends in price and ownership change in Khulna's urban fringes.
[12] The major regional infrastructure project (the bridge on the river Padma) connecting Khulna city and the capital city of Dhaka is in progress. A new Export Processing Zone (EPZ) in Mongla, just within the Khulna region, has begun to attract regional investments.
[13] Khulna has experienced a consistent 'Hindu flight' to India as Hindus sell their land in Bangladesh or exchange properties with Muslim communities leaving India [data from 1951-2011 documented in Chakraborty (2012)].

who migrate to Khulna city with few assets beyond farming skills. They occupy fringe spaces through informal negotiations with absentee owners and take care of the owners' land.

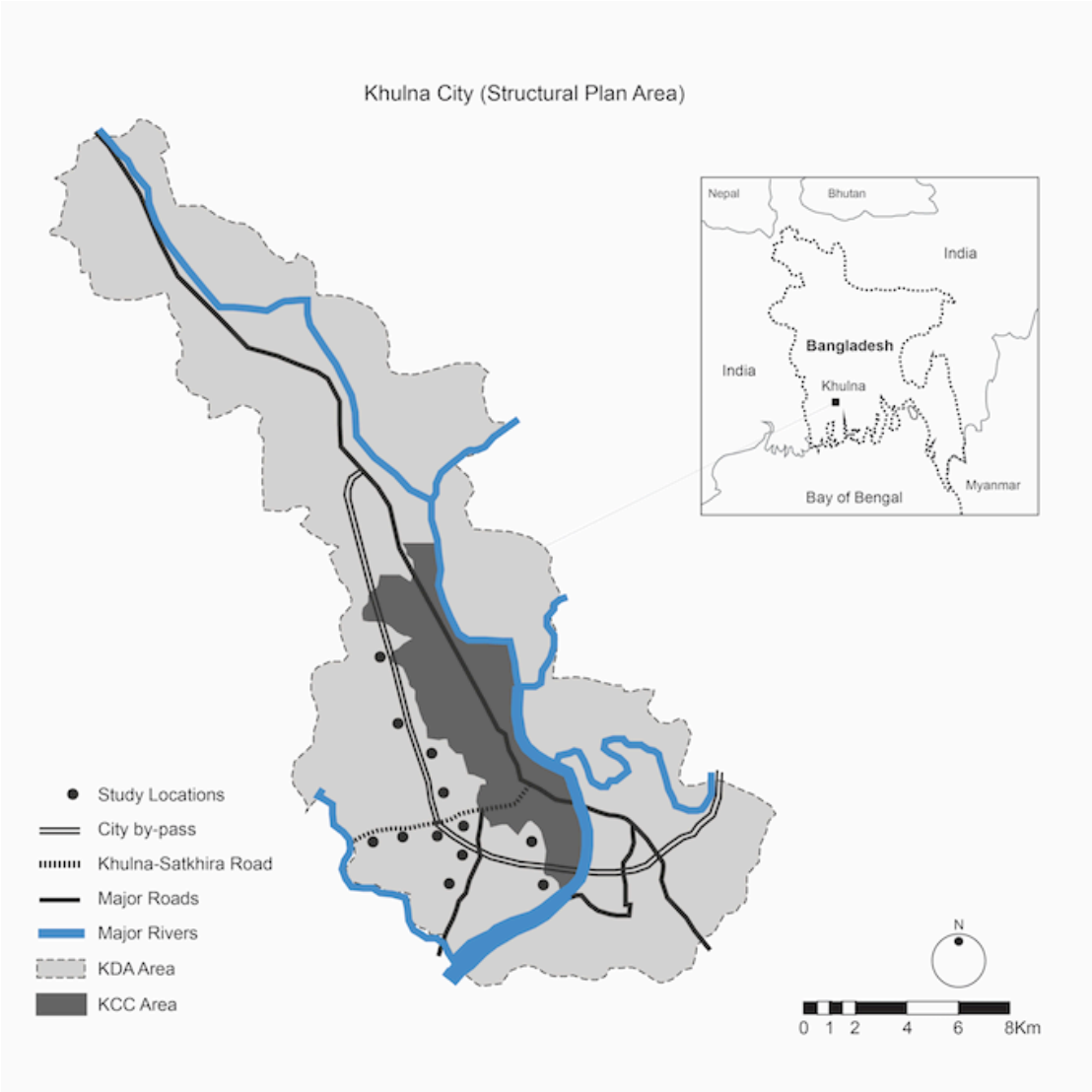

Figure 5.1: Study locations in the south-western urban fringes of Khulna

The lead author drew on past knowledge and snowball sampling to invite 17 displaced families spread across 12 locations in the south-western fringes to participate in the research. Of these 17 families, twelve families are Muslims, while the remainder are Hindu. The families migrated from coastal villages in southern Bangladesh. Loss of

land and livelihoods in villages due to long-term inundation of farmlands, soil erosion and soil salinity in the aftermath of frequent disasters has forced them to migrate to the nearest regional centre, Khulna city.[14] The participant families have been living in these urban fringes for between five and 25 years with 13 families on privately owned land and another four families living on vacant government owned land either by the road or by the roadside canals. Although the government tends to overlook these unauthorised occupations until the land is required for public infrastructure, occupiers still need to seek verbal consent from adjacent private landowners.[15] All 17 families have accessed lands by agreeing to look after absentee private landowners' interests relating to their lands.

The methodology was developed to capture the dynamism of human-non-human encounters informed by the participant families' engagement with the fringe ecologies in shaping the production of home. In exploring human-nature encounters, there is growing recognition of a need to 'do more' and develop means that go beyond humanist methods of 'talk and text' by decentring human control in the research processes and including non-human agencies to inform research (Dowling et al. 2016). A range of embodied and performative techniques are being developed, such as Shillington's (2008) use of "walking in combination with the act of mapping"[16] to encounter human-plant interactions in the marginalised homes of Nicaragua and Lorimer's (2010) use of 'moving image' methodologies to research human-elephant

[14] See Ahsan et al. (2011) for details on climate migration in coastal Bangladesh.
[15] Urban elites have considerable influence over vacant government lands – see Barkat et al. (2001) for the power dynamics of government-owned land.
[16] Shillington (2008) takes inspiration from Hitchings and Jones's use of the "act of walking … as a springboard for methodological investigations" (2004: 9).

encounters. A more recent example includes Pitt's (2015) work on community gardening where she developed a method of 'knowing through showing' that redistributed expertise among non-researcher participants and fine-tuned the researcher's perception to attend more closely to the plant species.

Responding to these performative turns in more-than-human research, we devise a 'photo-response' technique.[17] It involves participants photographing their home, describing the content of images and finally mapping the image locations to visualise, spatialise and contemplate their dwellings. Photo-response thus combines performances of 'seeing, telling and being' for the research participants and orients the research towards the more-than-human entanglements from which homes emerge. The lead author offered two disposable cameras to volunteer households and requested participants illustrate their homes by capturing photos of anything they found relevant to home. After the production of images, narratives on the photos were gathered through informal conversations about the photos in one-on-one and group settings. Alongside describing their photos, participants guided the lead author physically through the image locations to map their domestic spaces. The lead author documented the domestic spaces through free-hand sketches on site.

All photos were cross-referenced to accompanying narratives and respective image locations. The contribution of human-nature relations in making sense of home and informing homemaking practices became explicit through an 'inductive' (Creswell, 2012) approach of analysis. The analysis was not governed by any pre-given theoretical attributes but it followed the organisation of data under different sub-themes that

[17] We described the photo-response technique in detail in Alam et al. (2018).

emerged from the ground up. Three types of imaginaries – aesthetic, spiritual and economic – became prominent through the participants' reflections on the non-humans in the photographs (in Figure 5.2). The distribution of human-non-human corporeal engagements informed by image mapping and sketches further made sense of the more-than-human influences in materializing marginal domestic spaces.

Figure 5.2: Human-nature relations inducing aesthetic (A – F), spiritual (G – L) and economic (M – R) imaginaries of home

More-than-human imaginaries of home in Khulna's urban fringes

In this section, we rely on the presence of non-human agencies in the study participants' photographs (Figure 5.2)[18] as an entry point to the discussion on imaginaries informing home and homemaking practice. The imaginaries influence the home's maintenance and materiality, making critical differences to whether homes would form or not.

Aesthetic imaginaries[19]

Diverse plants, animals, and objects of nature have visual importance in domestic premises. Through their presence, non-human agencies contribute to well-being and the sense of belonging to home and inform domestic practice. In the Australian context, Power (2007, 2008, 2009a) documents the contribution of furry (animal) charisma in enhancing familial relationships, while Head and Atchison (2008) point to the capacity of leafy non-humans in drawing affective responses and shaping homes. However, the non-human agencies in this study, such as the plants grown in the back alleys near sewage disposal channels, or the skinny less pampered canine species lying at the entrance of the home (Figure 5.2A), or the shallow pit filled with raw cow dung (Figure 5.2B), may not seem to be charismatic or aesthetically pleasant to outsiders. The participants explained the contributions of these non-humans in making their home exquisite, informing various domestic practices and leading to the material

[18] The photos in Figure 5.2 represent a total of 204 photographs taken by the participants.
[19] The analysis of three imaginaries is inspired by Shillington's (2008) analysis of three socio-ecological relations; however, a key difference is drawn between imaginaries and relations as we see imaginaries as a tool to interpret socio-culturally embedded relations and practice.

rendering of home. The aesthetic elements are more than a beautiful landscape, but according to Solnit, are the 'site-specific' expressions of "spaces and systems *dwellers* inhabit, a system *their* own lives depend upon" (2001: 47).

Flowers (mostly, *Tagetes patula*) play a major role in these domestic ecologies, not only through their bright appearances adding splendour to the physical home but also by their strong smell which immediately create a sense of 'being at home' for the human body. According to Delight, one of the female household heads,

> "These flowers (Figure 5.2C) do not only beautify my home; they tell me if I have reached home safely. In the evening, when my husband approaches home from work, even from the highway, he gets the strong smell. It draws us to home. If the flowers stop blooming, we immediately knew that the house got dirty and it needed a cleaning."

Domestic maintenance, in this case, is a multi-species affair, with the routines of house cleaning being influenced by the flowers' blooming cycle. The flowers with their bodily appearance or disappearance from the courtyards evince a healthy home for everybody. The cow dung (Figure 5.2B) is mixed with mud and used to polish the floor of the yard and the mound at the base of the plants to prevent erosion of the courtyard floor. One of the male household heads, Shiva pointed to his wife's photograph of the lush green patch (Figure 5.2D),

> "In the city you may call 'white' colour as the symbol of cleanliness, as you always show the glowing white shirt flapping on the rooftop in those laundry powders' promotion; but here in our yards, 'green' is the most

refreshing among all, we certainly feel that we are more productive if the surroundings are green."

Herbs (*Cantella asiatica*) and rhizomes (*Curcuma domestica*) have significant aesthetic value in these domestic domains as organic beauty aids. The female household heads plant them in the narrow alleys beside the semi-outdoor kitchen and along the fences of bathing places; the women nurture the herbs and rhizomes with care and attention year round. Herbs and rhizomes flow from these unlikely gardens to the kitchen's interiors, finely-crushed by hand to become spices for curries or medicine for the skin and travel through the human body. The non-human agencies help the dwellers rely less on the market, ultimately contributing to economic well-being in domestic settings.

Beneath the aesthetic roles of flowers, herbs and rhizomes, they have a deeper contribution in utilizing the leftover spaces of the home, which otherwise may remain as muggy back alleys behind the primary living spaces. Caring for these plants ensures caring for the body and caring for surrounding areas. Such material spaces are not intentionally produced but still play a major role in these marginalised homes. A lack of attention to these non-humans may result in a deterioration of domestic hygiene and health.

Some charismatic fauna, such as birds, actively participate within domestic settings. Many older couples either left their children back in the villages, or their grown-up children left them behind. Taking care of the charismatic birds, talking to them and sharing meals with them provide familial satisfaction, Hope described,

> "After a whole day's hard work, my peace of mind is that two birds (Figure 5.2E) call me dad. I can hear them yelling from the entrance – they are sometimes better than the human children. They would never leave. We may be starving, but we have to arrange food for them. They eat rice, vegetables; whatever we eat they also eat. If we are late, they start yelling 'give rice.'"

Studies have documented human-animal domestic relations to argue how those relations imbue different forms of affects (sometimes domination) to inform the modern western home as a multi-species cohabitation (Power 2008; Smith 2003). We argue further that human-animal relations in this more marginalised socio-economic setting are built over spontaneous multi-species exchanges established out of mutual bodily needs of both humans and non-humans. The families share their food with stray non-human animals (Figure 5.2A) with whom they cohabit. While the human dweller ensures the non-human's nutrition, the penurious mongrel or the pet bird gratefully adorns the entryway, 'guarding' home. The heterogeneous bodies break free from human-animal distinctions to enable multi-species familial imaginations and belongingness to home.

Not only the non-human *furry* (Power 2008) bodies but also the leafy ones located at the home's liminal spaces contribute to domestic practices, thereby, the material configuration of home. Extracts of 'henna' (*Lawsonia inermis*) leaves are used to ceremonially paint the female bodies and the floors of the yard. The live Henna plants also enclose the home's compounds. The dense leafy formations maintain an acceptable level of ventilation to comfort the human body in a warm and humid climate. They filter dust and noise from the adjacent roads to provide bodies with a pleasant and

homely habitat. The fence maintains desired visual privacy for the female body, whereas the thorny cactus within it (Figure 5.2F) reinforces the screen as a fence to prevent intrusion of uninvited bodies (e.g. wild animals) into the interiors, thereby shaping the material boundaries of home.

Spiritual imaginaries

The images (Figure 5.2G-L) demonstrate some of the human-nature relations that derive from spiritual imaginaries and practices in these marginal domestic spaces. Similarly, the work of Mazumdar and Mazumdar (2009) on Hindu immigrants' homes in Southern California shows how the migrants' religious beliefs are inscribed into domestic spaces through different landscaping rituals common through the diaspora. Our study reveals that beyond formal religion, the dwellers' past agrarian identities, norms and practices inform protocols to engage with non-human plants and animals in their new home. These engagements are affective as much as they are spiritual. They create a sacred ambiance and ethos in domestic living, inform homemaking practices and affect homes in tangible ways.

In these study homes, water is sprinkled around the entryway every morning. At the doorstep, feet are scrubbed with water from the pitcher (Figure 5.2G). Such rituals are common in villages among peasant communities who work barefoot in the field from dawn to dusk. Amongst these participant families the rituals continue. These practices purify the spirit and home. They are also of practical value, as water retains moisture in the air and dampens dust providing both thermal and respiratory comfort to the bodies that dwell inside the home. However, the water is not 'chlorinated, controlled or abstracted' (Kaika 2004:267), but rather fetched from the homestead (or community)

ponds. The dark green colour and slightly oozy tactile feature may not look 'clean' by the modern scientific standards; however, the female household head, Swan explained,

> "I am a peasant's daughter, I used to be a peasant's wife back home in the country; but as we were displaced from our ancestral land, my husband stopped working in the field; even though we are now living in cities, certain things we could not leave; my forefathers celebrated water and earth as God: keeping them close to us keeps the evil away."

The existence of water imbues the imagination of a purified home, and informs the maintenance and wellbeing of home. The customary practices assigned to water define the hierarchy of different household spaces, such as the doorstep, the semi-outdoor living spaces or the private altar.

Certain plant leaves (*Codiacum variegatum*) and flowers (*Hibiscus rosa-sinensis*) (Figure 5.2H) are offered to the altar of God in Hindu migrants' homes. Through unconditional sharing of leaves and flowers among housewives for ritual purposes, these non-humans travel across homes in the neighbourhood. Non-human agencies connect homes together and create a sense of neighbourliness through the evocation of a shared spirituality. Neighboring women congregate to perform ceremonial rituals; the more-than-human exchanges and encounters materialise through shared living spaces. Spirituality allows the unobstructed flow of human-non-human bodies to the semi-private semi-outdoors (such as the veranda) spaces of homes.

The *Tulsi* plant (*Ocimum tenuiflorum*), also commonly known as Holy Basil (Figure 5.2I) stands in the centre of the Hindu homes. Its leaves provide relief for the human body from common cold and influenza, and are shared among neighbours

irrespective of religious backgrounds. The banana trees on the pond side take the nutrition from the boggy ecosystem; their flat leaves are used to organise the offerings to God, and their branches are submerged into the pond water to purify the water for household use. These spiritually relevant non-human bodies are encountered in domestic spaces from verandas to soggy pond-sides, enriching the ways in which marginal groups live in, with and as part of a more-than-human world.

The old tree (*Ficus benghalensis*) (shown in Figure 5.2J) is central to several ceremonial rituals. The outdoor domestic spaces and activities are organised to respect the tree as if the guardian of the house. Irrespective of dwellers' religious affiliations, skulls of deceased cattle (Figure 5.2K) adorn the home's entrance in the hope that they would prevent any illness entering the home. Only the skulls of animals that had a disease-free life and were part of the family in their worldly life are used. Whether the skull or the sage tree imbues a healthy home is beyond the scope of this study; however, the dwellers find peace of mind established through these more-than-human assemblages which actively shape the living spaces, as evident in the female participant, Seven's comprehension of her photo,

> "I could build the cowshed (Figure 5.2L) a bit away from my living spaces. However, it is very cold at night and we both get warmth staying close… it will be hard for you to imagine, the cows are no less competent than those canine species at night. If anything goes unusual, it would budge up, wag and caution us. I only keep an eye on it, in return, it keeps an eye on the whole house."

Later in the discussion, Seven added with an affective tone,

> "For generations, we were farmers, for us, the milking cow is divine, she is the mother; disrespect to her would bring something sinister to the house, and without her presence the house is barren."

Like the narrow alley between the cowshed and the bedroom, and the transitions between the entryway and the courtyard accommodating the sage tree, the muddy and slippery pond-banks and their banana plants are essential to spiritually significant domestic practices. Non-humans in these unconventional spaces are valued and respected as indicated by Hope,

> "At times, it was hard to sell the cow, they become part of the family, but we are grateful that because of these generous animals we are still surviving."

In the face of much incapacity due to their vulnerable socio-economic circumstances, non-human agencies of nature such as cows, fish, plants and roosters can be relied upon and help the migrant families remain hopeful. Sometimes, when there are no material interactions with water, a *tulsi* plant or the old trees imbue a sense of purity, security and domestic productivity. For Hope or Seven, how best to engage with non-human agencies is deeply embedded in ancestral agrarian protocols, communicating affect, familial feelings, spirituality and wellbeing.

Economic imaginaries

Studies show that patios and domestic gardens sometimes become spaces of economic opportunities through sales of plants and plant-based products (Bhatti and Church 2001, 2004; Shillington 2008, 2013). Non-human-related home economic

practices especially help marginalised inhabitants negotiate their right to habitable spaces in cities (Hovorka 2006; Shillington 2013). We further find that pro-poor marginal homes are sites for diverse non-traditional economies involving non-human agencies of nature that are neither limited to plants and birds only nor always confined within the physical home. Non-human elements such as earth, water, weeds and animal excreta constitute vital economic relations that circumvent the material boundaries of home. The diversity of encounters is evident when Pearl pointed to her photographs (Figure 5.2M-R) and replied,

> "I have no time to rest from dawn to dusk; watering plants, milking cow, feeding cattle, drawing water, dipping cow dung, moulding clay, scavenging snails and crabs (Figure 5.2M), plucking dry leaves, stacking firewood, threshing paddy, clearing and collecting weeds, planting lentils, drying plums, trading eggs and carrying them to the local bazaar (Figure 5.2N) – when you have none to rely on, you have to remain open to anything. All are done with these two hands. They feed the family."

In an economically marginalised setting where there are relatively few opportunities for income, non-humans provide essential elements for subsistence living. The non-human agencies of milk, water, cow dung, snails, leaves, weeds, lentil, paddy, plums, eggs and clay contribute to the home economy and help these dwellers' negotiate space in the newly settled urban landscape.

Economic opportunities extend outside the home through various shared practices. For example, poultry and goats, being raised for sale are mobile across neighbourhoods. Nourishment of these non-humans takes place in the vacant lots, in

the abandoned pit or at the edges of watershed (Figure 5.2O) and roads. These non-humans feed on weeds and grass that are unconditionally available from the fringe ecology. Looking after the animals, women and children live and share these 'extended domestic spaces' (Alam et al. 2018) for a substantial amount of their days. These interstitial spaces inform migrants' locational choice of the urban fringes over the slums in the urban core. As Pearl added,

> "You can't enjoy these opportunities living in the slums. Is there any space there at all? Who needs a farmer in the town?"

In contrast Grace explained,

> "I have made these fuel sticks (Figure 5.2P). I collect cow dung from door to door. For every three baskets of cow dung, because of my labour, one basket is mine. I can use the common road to bake the fuel sticks under the sun. There is not much room within the house; the road is my workplace. They are used for my own cooking."

Grace's other conversations reveal that for months at a time, female dwellers will rear someone else's cows and goats sharing the milk proportionately to the value of labour to ownership. These transactions and flow of non-humans hint at 'diverse' (Gibson-Graham 2005)[20] economic possibilities emerging from and between marginal homes.

[20] See Gibson-Graham (2005) for diverse economies, that could not be elaborated within the scope of this paper.

More-than-human economic imaginaries unsettle the humanised imagination of home as a confined territory. Studies demonstrate that non-humans within home's immediate surroundings rupture both the material and the imaginative borders of home (Head and Muir 2006; Power 2009a). Our study homes are also ruptured and externalised in diverse ways through the economic appropriation of non-human plants (i.e. herbs, dates), animals (i.e. domestic poultry, fishes) and animal extracts (i.e. eggs, cow's milk). Non-humans circulate across home's interior and its immediate surroundings. Sometimes the corner of home transforms into a shop (Figure 5.2Q), fences facing the road become the display shelf for homemade products (Figure 5.2R), and the road itself emerges as a shared workplace (Figure 5.2P). The home, its interior and the relations within are externalised to the outside street, canal and vacant lots. Sometimes, these relations extend further to the neighbourhood marketplaces (Figure 5.2N).

These more-than-human economic opportunities evolving in marginal domestic settings are closely tied to the female bodies as the female household heads mostly spend time with non-humans in these 'contact zones' (Haraway 2008) in the absence of the male household heads who are busy at 'work.'

> "My husband works at the construction sites in town. He has no idea what happens at home for the whole day. The only impression he has about me is that I am a 100% kitchen-bug. Because when he leaves in the morning and comes back in the evening, I am in the kitchen preparing meal."

Household head, Faith, in her late thirties, expressed this with dismay, then after taking a second or two to recompose herself, went on to defend her role,

> "However, I have other engagements as you can see in the photos, otherwise, how would the family run? How could he have that anxiety-free sleep at night? He thinks that everything is fine because he manages well."

The first part of Faith's conversations explains her home as a contested terrain of unequal relations of power, the much-critiqued stereotypical human home[21]that alienates and confines female bodies. However, the economic opportunities associated with the entangled non-humans help liberate female bodies across home and outside of home to access neighbourhood spaces. Perhaps that is why the second part of Faith's conversations reflects that while her everyday encounters with the non-humans may remain hidden[22] to her husband, certainly these non-humans have enabled a sense of freedom as well as the security and sustenance for herself and her home in the urban fringes.

Material production of home in Khulna's urban fringes

The material implications of the three imaginaries illustrated above are detailed in Figure 5.3, which shows how participants mapped their domestic spaces in one of

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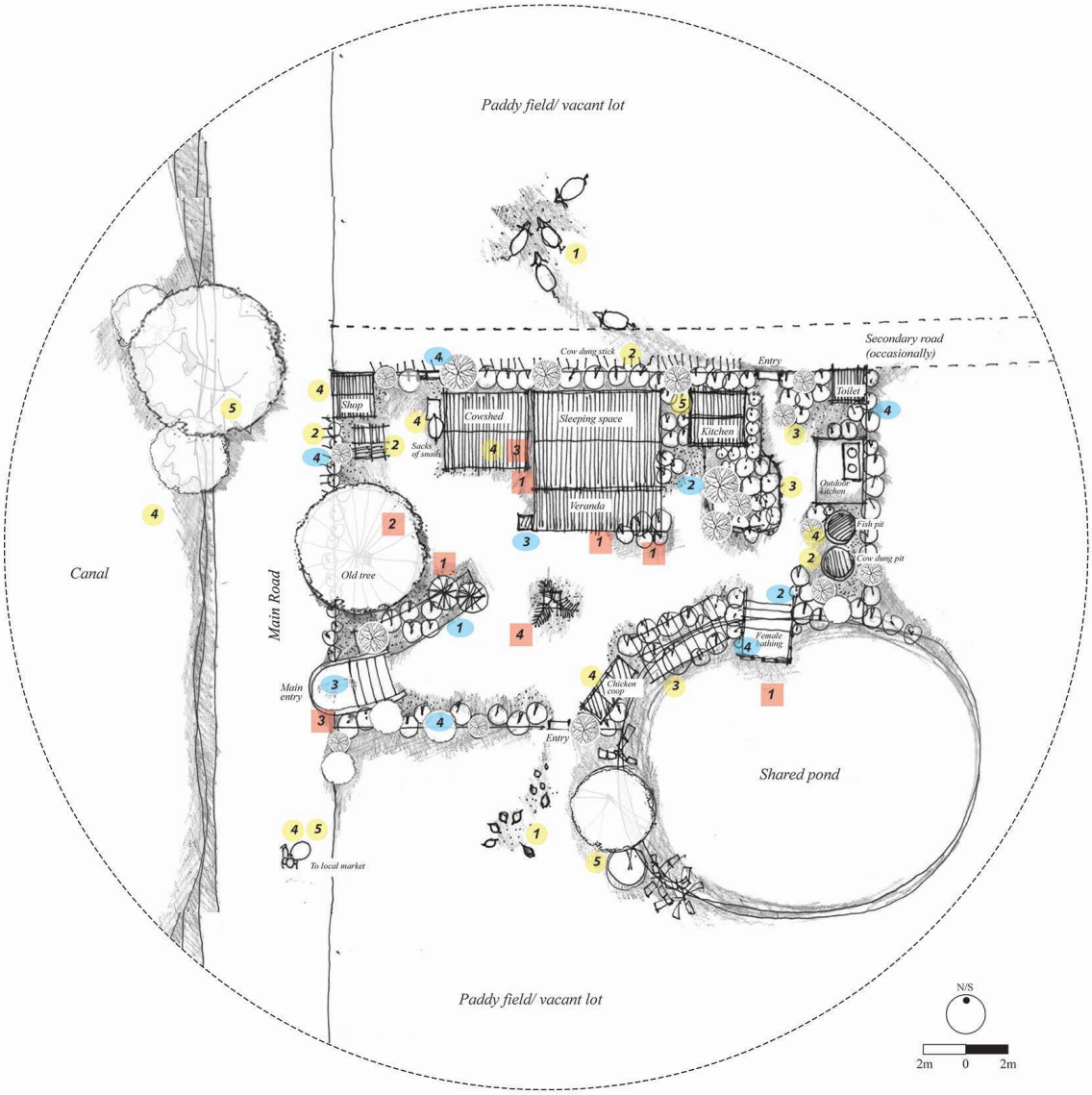
[21] Rose (1993) indicates the problem of stereotypical human homes that position women within homes that are sites of oppression by the state, by capitalism and by patriarchy.
[22] Bhatti and Church (2000: 194) argue that gardening as part of homemaking practices can create 'hidden' social relations that are different for women and men highlighting the creation of gendered domestic spaces.

the case study neighbourhoods. It provides a graphical representation of the material home and how its production process is shaped by aesthetically significant, spiritually important and economically relevant non-human agencies. The representation emphasises the extent to which migrant homes bear the imprint of these imaginaries with the meanings, feelings and materialities of home reflecting intimate more-than-human negotiations. Lack of appreciation of the materialities produced through migrant imaginaries leads to a lack of acknowledgement of migrants' spaces in Khulna. The entryway, yard, kitchen garden, pond-side vegetation patch, alleyways and the altar are spaces of more-than-human performances. Even the apparently left-over spaces, for example, the shanty back-alleys of the main living spaces, the boggy strip of land beside the kitchen, the cow dung pit, semi-outdoor storage-come-verandas-come-working space, and the aisle of the watershed are co-produced through human-non-human imaginaries and entanglements. Non-domestic spaces, for example, the neighbourhood street, the nearby bazaar, the paddy field, or the extended retail outlet-come-workplace are also appropriated by the dwellers and involve intimate human-nature relations. These spaces mostly remain outside the physical home, yet they are necessary to the production of homes and livelihoods.



Aesthetic Imaginaries

1. *Flowers (yard, entryway)*
2. *Herbs, Rhizome (kitchen-garden, pond-side vegetation patch)*
3. *Companion fauna (veranda, entryway)*
4. *leafy and thorny plants (alleyways, toilet bathing space, borders of home)*

Spiritual Imaginaries

1. *Water, leaves, flowers (veranda, entry-way, indoor altar)*
2. *Old tree (shaded gathering space, outdor altar)*
3. *Cow and cow skull (Enclosure of living spaces, entryway)*
4. *Ceremonial plants (yard, outdoor altar)*

Economic Imaginaries

1. *Domestic animals & birds (shared living spaces)*
2. *Cow dung (shared workplace, storage, cow-dung pit)*
3. *Vegetable plants (kitchen-garden, pond-side vegetation patch)*
4. *Animal extracts, i.e., milk, eggs, snails (retail outlet, borders of home, market)*
5. *Fallen leaves (kitchen store, shared neigh-borhood spaces)*

Figure 5.3: More-than-human imaginaries producing material spaces of home

Corporeality is central in the construction of homes as the imaginary and material home 'make sense' through the encounters and flow of human and non-human bodies. Shillington (2008) describes corporeality as an essential tenet in impoverished socio-economic conditions informing various dietary and gardening practices at home. Our study concurs; however, corporeality unfolds in many other forms beyond the dietary and gardening, through practices such as caring, cleaning, cooking, cooling, decorating, fencing, healing, sharing and worshipping. Imagining a home involves interactions with a range of non-human leafy, furry, living and non-living bodies that are available from the fringe ecologies. Together with humans they 'communicate' (Crouch 2001) the aesthetic, spiritual and economic sense of 'being' at home and inform practices of 'doing' the home materially.

Table 5.1 provides a rather simplistic representation of non-human agencies within and about marginal homes. The three imaginaries help the participant dwellers feel at and make sense of home, while also involving bodies and things that enable day-to-day domestic practices. These processes are not linear, as Table 5.1 may suggest, but overlapped and complex. Importantly, besides the attention to different domestic spaces, the shared more-than-human bodily flows mark these marginal homes as porous: the homes are ruptured in multiple places that incorporate elements of the neighbourhood beyond the physical home. The ruptures, as well as the connected non-domestic spaces, are essential elements of living in these socio-economic circumstances. For migrants, the imaginaries act as filters to differentiate habitable spaces from unhomely spaces in the context of their displacement and subsequent adaptation to the new urban environment; in the absence of formal tenure, the

imaginaries and associated human-non-human collaborations communicate a sense of home and wellbeing.

Table 5.1: More-than-human imaginaries informing homemaking practice and producing material spaces of home

Non-humans	*Imaginaries of homes*	*Homemaking practices*	*Production of material spaces*
	Aesthetic		
Flowers	Sense of belonging, healthy/unhealthy home	House cleaning	Yard, entryway
Herbs, Rhizome	Health and wellbeing	House cleaning and health care practices	Kitchen gardens, pond-side vegetation patch
Companion fauna (birds, dogs)	Familial satisfaction, sense of security	Everyday routines at home	Entryway, veranda
Plant leaves	Health and wellbeing, sense of privacy	Fencing, domestic decoration, health care and beautification	Alleyways, bathing spaces, toilets, borders of home
	Spiritual		
Pond water, leaves, flowers	Health and wellbeing, sense of purity, sense of neighbourliness	House cleaning and cooling off, domestic rituals	Entryway, indoor altar, veranda
Old tree	Sense of security	Domestic rituals, orientation of domestic activities	Shaded gathering space, outdoor altar
Cow and cow skulls	Sense of domestic productivity, healthy/unhealthy home	Caring and sharing of domestic spaces	Enclosure of private living spaces, entryway
Ceremonial plants	Health and wellbeing, sense of purity	Water purification, domestic rituals	Outdoor altar, yard
	Economic		
Domestic animals and birds	Economic wellbeing	Grazing of domestic animals	Semi-private shared living spaces
Cow dung	Economic wellbeing, sense of neighbourliness	Shared home-economic practice	Retail outlet, shared workplaces
Vegetable plants and animal extracts	Economic wellbeing, sense of neighbourliness	Shared home-economic practice	Retail outlet, shared workplaces
Fallen leaves, snails	Economic wellbeing	Domestic cooking, thatching of roof, cost-saving income	Shared neighbourhood spaces, Kitchen storage

Source: Author

Conclusion

> "Others' land, others' house, I only come to dwell, but I can never own… whom do I express my misery..." (Hope, female household head, aged 48 singing a folk song)[23]

The song is a testimony of Hope's precarious home on the absentee owner's land without any formal (and institutional) recognition of her family's existence in the fringes of Khulna city. However, acknowledging homes as imaginative, material and more-than-human achievements has allowed us to focus on how everyday human-nature relations shape Hope's and other participants' informal homes and lives in a marginalised urban setting in Bangladesh. Re-imagining a home through its human-nature relations has offered unconventional yet graspable details about how homes are produced and maintained by re-producing the migrants' past agrarian identities, belief systems, livelihoods and lifestyles. In the context of rural in-migration to cities, the more-than-human imaginaries of these households, including aesthetically significant, spiritually meaningful and economically relevant situated practices help explain how non-human agencies of urban land shape their homes outside stereotypical slums, but in the urban fringes. We observed that the households' corporeal relations to the non-human urban landscape play a critical role in producing marginal home-ecologies incorporating both domestic and non-domestic spaces which, in turn, enable one of the most vulnerable groups – migrant women – to gain access to urban spaces. Given that migrants and other disadvantaged communities often face significant challenges of spatial exclusion in cities, more inclusive cities can be built by appreciating the role of

[23] A popular Bengali folk song is by singer Abdul Alim (Latif, 1960).

non-human nature in co-constituting the fluid relationships between homes and the surrounding urban landscapes.

A more-than-human re-imagination of the fluid human-nature relations of marginal domestic settings can contribute to a more nuanced and non-elitist scholarship of theorizing urban-nature. Exploring local imaginaries in the intersections of home and urban spaces provides a grounded means of building upon and appreciating dwellers' everyday interactions with nature that shape the production of marginal spaces and shed light on the socio-ecological complexities of urban spaces that arise through the practices and production of homes. Home is a point of orientation to the city, interpolating the non-human bodies of plants, animals and the human body together to materialise habitable spaces in the urban ecology. In this way, the home opens up "alternative ways… how environmental and social changes are dealt with on an everyday basis" (Shillington 2008: 773). In fact, recognition of these social and environmental complexities not only eliminates the problems of stereotypically 'framing' the urban poor but also offers new 'frames' to rewrite marginal socio-ecological narratives within the overtly deterministic 'elite frontier' of speculative urban expansion. We propose that the conceptualisation of the urban and its uneven metabolic processes can benefit from re-imagining the home in ways that highlight a closer and embodied affinity with non-human nature. In this sense the urban and natural can be simultaneously considered through eliminating the humanised home's

'hegemonic paradoxes'[24] of nature and culture, private and public, individuality and sociality, formal and informal.

We end by emphasizing the promise of extending more-than-human geographic exploration to non-western contexts. While the western home's tendency towards increasing separation from nature demands research, the deeply ingrained human-nature entanglements of some non-western homes provide an alternative lens to understand more-than-human worlds. The migrants' more-than-human living helps re-imagine home in a different light, in which non-human nature is no more the 'external category' that continues to be contested within the popular (often the Western) imagination of home and domesticity. In this way, more-than-human research may reach beyond the 'familial' human-nature emphasis based on living with particular companion species (Power 2008; Smith 2003) portrayed in affluent western homes, and conveyed in homemaking magazines (Power 2007) or by focusing on some selective domestic spaces of gardens, courtyards or kitchens (Bhatti and Church 2001; Head and Muir 2006, 2007; Hitchings 2003; Longhurst 2006). Through creative research techniques, more-than-human research can help highlight the dynamism of marginalised communities too often depicted as simply poor or under-developed, and support and build on existing human-nature relationships in nurturing and nourishing ways. As we have shown, these homes are not simply material buildings but are supported and enriched by intimate place-based aesthetic, spiritual and economic imaginaries that provide homes with feeling, meaning, reasons and practices. Through such research, more-than-human scholarship has the potential to contribute valuable

[24] See Longhurst (2006) for 'hegemonic paradoxes' in the context of domestic gardens in New Zealand.

insights to social and environmental justice. It is here, amongst some of the most marginalised populations in Khulna city, that the city's past failure to cohabit with nature is being challenged and some of the most exciting everyday multi-species experiments are taking place.

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Chapter 6: Unbounding home

Background

As shown in the preceding chapters (chapters 3, 4 and 5), homemaking extends beyond the physical house. This chapter offers a detailed understanding of the contribution of the surrounding domestic ecologies to marginal living.

Photo-response revealed substantial engagements of female household members in diverse mobile livelihoods involving fringe ecologies. Focusing on migrant women's mobility outside home, the chapter addresses the sub-research question: what are the competencies of homemaking informed by more-than-human relations? The chapter utilises the concept of unbounding, drawn from Cook et al., (2016, 2014), that recognises the fluidity and exchanges between the structures and practices of dwelling by rethinking home as spatially open, both inward and outward. I devised day-long walking interviews with three participant women to explore their livelihoods of collecting trash, clearing weeds and crafting cow dung. To access these livelihoods, the migrant women must leave their own homes and enter others', but to do so must negotiate cultural norms and domestic responsibilities in both homes.

Unbounding is helpful in understanding these migrant women's corporeal and gendered competencies in engaging with fringe ecologies to support their lives. Their mobility resituates these migrant homes within broader neighbourhood socio-ecologies, providing opportunities and material resources to sustain home. The chapter analyses

and highlights more affective and experiential competencies of home that are lived outside formal institutional supports by identifying assemblages of humans and non-humans. These under-valued extended networks are important in rethinking approaches to housing of vulnerable communities, going beyond the usual discourses that focus on physical shelter-centric rehabilitation.

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Unbounding ‘home’ for housing the homeless in contested cities

Abstract

The paper extends understanding of the more-than-human home by exploring the precarious and often mobile informal homes of rural migrants in Khulna city in Bangladesh. It focuses upon the ways migrant women in particular support their homes by negotiating spaces beyond the material shelter. The concept of ‘unbounding’ (Cook et al., 2016; 2014) is used to trace the fluidity and connections established between migrant homes and neighbourhood socio-ecologies through women’s mobility. The findings gathered through walking interviews associated with three women’s livelihoods reveal that different expendable non-human agencies (e.g. trash, weeds and animal excreta) create conditions of labour in which migrant women hold specific competencies to secure essential resources for home. Unbounding helps explore beyond a single home by positioning home within a broader neighborhood socio-ecology that involves multiple homes and public spaces that women traverse to support their own homes. Rethinking home through unbounding offers opportunities to examine the unique ways urban homeless populations strategically engage with diverse agencies/actors in reproducing multi-scalar domestic socio-ecologies. This provides an important and different lens with which to approach homelessness beyond the often problematic housing-first or material shelter-oriented approaches. These more-than-human strategies of marginalised groups have many lessons for housing studies in more-than-human cities.

Keywords: Bangladesh, unbounding, more-than-human, migrants, homemaking, home, housing

Introduction

> "We have been living in the city for last 15 years, our house moves from land to land in every two-three years. …The way we survive here would be hard for someone like you from the outside to understand… Even our own men do not understand what we do, why we walk from door to door now and then. There was a saying back in the village – if wives step outside the house it gets possessed by the evil. But, you know, we are already possessed by the biggest of all, poverty!…
>
> Come, walk with me one day, you will know how these two limbs keep the home alive." [Pearl[1], migrant female household head]

Pearl's reflections stress the importance of mobility outside home for migrant women living on the fringes of Khulna city, Bangladesh. Home-making practices extend into the neighbourhood where women engage with non-human agencies as a form of labour to sustain homes that are informally negotiated in vacant private and public lands. Whereas the male household head's mobility outside the home to take a job is seen as normal, women's mobility for the same reason is often constrained by the strong cultural norms prevailing in the migrants' agrarian origins. Drawing on feminist and more-than-human geographic scholarship on home and homemaking, this paper

[1] All names are anonymised.

explores the ways women engage in home-making practices that extend beyond the material borders of their houses. It acknowledges that home is never a solely human project; instead diverse non-human agencies (of animals, plants, water, earth) are seen to influence the dwellers' homemaking practices, negotiations, imaginations and materialities of home (Dowling and Power, 2013).[2] The paper uses the concept of unbounding to help understand how marginal communities, in this case migrant women, secure homes by navigating wider 'assemblages' involving human and non-human agencies (Baker and McGuirk, 2016). The research has implications for rethinking housing/home for marginal communities in non-Western contexts beyond dominant shelter-centric housing discourses.

In this paper, we discuss the concept of unbounding in the context of housing/home to highlight the home's "continuities and interdependencies with wider socio-ecological structures and practices" (Cook et al. 2016). Unbounding provides a conceptual lens to unpack different stages of women's mobility that mediate the physical house and broader socio-ecologies that support the home. The method, walking interviews, was used to capture the performative linkages migrant women have established with fringe ecologies. The findings show that both the study homes of marginal migrants and those of the suburban elites where the migrant women work outside their patrons' arrangements need to conceptually and materially open and bind together as socio-ecological 'assemblages of *mutual* care' (emphasis added) (Lancione,

[2] See (Dowling and Power, 2013) for the summary of four interwoven strands in the more-than-human home. See also (Franklin, 2006; Cook et al., 2013; Power, 2009a; Wilkinson et al., 2014).

2014: 26)[3] which in turn contribute to the migrant home's long term maintenance. This allows livelihoods that generate tangible and intangible supports for home to be negotiated. We conclude that rethinking the migrant home beyond a distinct physical shelter as part of a collective unbounding of home-ecologies poses unique opportunities through which to approach housing in the urban margins, building on alternatives to the dominant 'housing first' approach (see the critiques in Baker and McGuirk, 2016; Kellett and Moore, 2003; Lancione, 2013). Unbounding provides a different lens with which to view homemaking practices and policies in marginal areas.

Unbounding home

The dominant portrayal of home by humanistic geographers is as a bounded place, a site that is cut off from the increasingly alienating world (Moore, 2000). This portrayal does not necessarily deny other forces that also bind homes with the wider political economic world (e.g. planning documents, mortgage finance, etc.), but in human geographic scholarship in the 1970s and 1980s, these external forces were seen to spatially and temporally regulate homes, rather than to liberate them. Thus, the modern home is constructed

> as a line separating the inside from the outside… a place supposedly untouched by the social, political and natural processes, a place enjoying an autonomous and independent existence. (Kaika, 2004:266)

[3] Lancione (2014) uses the term assemblages of care to describe an array of public policies and their discursive 'expressions' of practice and materiality that create different conditions of homelessness.

Homes are approached as dividing the inside from the outside. Home is associated with certain types of gendered labour: a space for reproductive labour, while productive labour has traditionally taken place outside the home (Chapman, 2004). In many ways the modern home has been bounded by an array of "limiting characteristics… often achieved by severe acts of exclusion and regulation…" (Schroder, 2006: 33).

More recent critical geographic approaches have unsettled the idea of home as bounded by highlighting the notion of the 'multi-scalar' home. Previously imagined borders of home are shown to be more flexible, recognising that the home is "simultaneously material and imaginative" (Blunt and Dowling, 2006: 22). Home is not bounded within the physical artefact of house only: the notion of home may occur outside the physical house as imaginative and metaphorical space in the homemaker's mind across the body, household, neighbourhood, the state, the globe and beyond (ibid) (for example, Law, 2001). Relations within the home are not static but can change over time to "transect the public and political worlds" (Brickell, 2012: 226). Massey (1992:14) elaborates that the home "had always in one way or another been open; constructed out of movement, communication, social relations" which have moved beyond the exclusionary imagination of home. Work in feminist political ecology (Mollett and Faria, 2013) has shown how women's choice of labour (e.g. foreign aid work or running a retail shop) have complicated the stereotypical assumptions about women and transcend the imaginative borders of gender and cast as well as the material borders of domesticity.

The borders of the humanised home are further dismantled through the more-than-human imagination of home and homemaking (Hitchings, 2004; Power, 2007; 2008; 2009a; 2009b; Steele and Vizel, 2014). Rethinking home in relation to non-

human agencies of nature has challenged the idea of home's isolation from its broader socio-ecological existence. The home is no longer thought of as bounded within the constraints of human social relations. Instead, diverse more-than-human relations are acknowledged as contributing to the imagination of home and home's materiality (Smith, 2003; Fox, 2006). Homes are seen as materially porous, engaged in flows with broader socio-ecologies involving diverse transactions of water, energy, etc. (Kaika 2004). This approach deconstructs the modernist imagination of home by highlighting the more-than-human flows, performances and relations that permeate the bounded home and expose it to the wider socio-ecological setting.

Together these multi-scalar imaginations of home unsettle the dominant notion of 'making' the home, where making denotes human acts of assembling things together. Baxter and Brickell (2012) recently called for a more expansive meaning of 'making' home that highlights the qualities of porosity, (in)visibilities, agencies and temporality. They argue that while 'making' home is typically considered an 'underlying goal of housing processes' (Dayaratne and Kellett, 2008: 55), making embodies processes of both 'making' and 'unmaking'. There are many subtractive or 'reversal' processes (Baxter and Brickell, 2014: 134) through which material and/or imaginations of home are unintentionally or deliberately, temporarily or permanently deconstructed. These processes equally shape what is home. For example, non-human objects (Steele and Vizel, 2014), elements of nature (Kaika, 2004), animals and plants as pests and pets (Power, 2009a) through their exclusion or inclusion are seen to constantly 'unmake' and 'make' humanist notions of home.

In the field of feminist geography, Pamela Moss (1997) introduced the idea of 'home environment' to include a range of extra-domestic activities in the notion of

home as a space (e.g. shopping, service provision, household goods, etc). Analysing a range of experiences of older women, she argues that the relations that constitute the household are not spatially confined to the physical, material dwelling, nor is the "household, as a narrow reading of domestic space", it needs to be replaced by the notion of home environment (Moss, 1997: 23). In the field of geographies of sexualities, Andrew Gorman-Murray's (2006) paper on uses of home by gay men in Australia deployed 'stretching home' to discuss the way practices that make a place a home reach across and move between supposedly public and private spaces. He argues that homemaking is not limited to private, domestic spaces, but is stretched, thus unbounding the space of home.

Cook et al. (2014) later pioneered the term unbounding to trace these dual processes shaped by the fluidity and exchanges between the 'structures and practices' of dwelling. They argue for consideration of the quotidian home as part of the home's wider political and environmental structures. Unbounding is seen as the home's 'irreducible capacity' for assembling dwelling practices within novel configurations that simultaneously open the home both 'inwards and outwards' (Cook et al., 2016). Home is seen as a "meeting ground in which intensive practices, materials and meanings tangle with extensive, financial, environmental and political worlds" (Cook et al., 2016: 1). The concept resonates with critical geographical and more-the-human accounts that have rejected the (modern) home's 'autonomous and independent' status. The home's inside is neither separated from its outside, nor are the identities and emotions within the home "untouched by the social, political and natural world" (Kaika, 2004: 266). Instead, unbounding refers to the examination of the home (and homemaking) by acknowledging the 'porous' (Power, 2007; 2009a) and 'multi-scalar'

(Blunt and Dowling, 2006: 22) home that constantly circulates and reconfigures ideas, feelings, relations, elements, objects and agencies beyond it (Brickell, 2012: 226).

The concept of unbounding facilitates approaching housing/home in two ways. First, it offers more practical opportunities to rethink home's connectivity to the outside, in 'two directions at once': towards the wider institutional settings as well as towards immediate physical surroundings (Cook et al., 2016: 1). On one hand, the home can be examined as part of the abstract networks of financing institutions, planning bodies, civic service providers and so forth. The second set of connections focus on home's conceptual and material extension into the surrounding ecologies. These latter connections are established through more intimate, affective and experiential encounters between homemakers and the diverse situated agencies within the landscape (Power, 2009a; Wilkinson et al., 2014). In this paper, we pay attention to the neighbourhood sociologies beyond migrants' physical homes and explore how these ecologies support female householders' livelihoods.

In this context, unbounding refers to the performative dimensions of homemaking through which home "is made rather than given, performed rather than secured" (Cook et al., 2016: 6). Home is never a complete project, and homemaking is never a completed endeavour (Baxter and Brickell, 2014: 136), but is constantly in the making (and unmaking) through many embodied and experiential encounters and achievements. This conceptualisation challenges the dominant 'housing-first' or 'shelter-centric' approaches (Baker and McGuirk, 2016; Kellett and Moore, 2003) that focus largely on provisioning the material home to house the homeless. In contrast, we understand unbounding as the ongoing processes of "unsettling and redrawing home's borders and boundaries" whereby homemakers respond to the 'sites and moments' of

the home's surroundings and perform accordingly (Cook et al., 2016). The unbounding concept can help explore migrant women's experiential accounts within the neighbourhood socio-ecologies that support home.

Study area and methodology

The fieldwork took place in Khulna city during 2014-2015. Being the third largest city of Bangladesh and a major regional hub in the south-west, Khulna city has always attracted coastal migrants from further south. The south-western fringes (Figure 6.1) in particular provide a gateway to the city for rural migrants for a number of reasons.[4] Agricultural activities, such as rice cropping, shrimp farming, sweet water fish farming, and poultry and shrimp hatcheries continue in the relatively less-developed fringe ecologies and these attract rural migrants with farming skills and knowledge. The fringe ecologies are also attractive destinations for the poorest migrating cohort entering Khulna with very few material assets. Here they are able to informally negotiate shelter with absentee landowners in return for primarily agricultural services.

[4] The Detail Area Development Plan (DADP) 2014, the key planning document for implementing the Khulna Master Plan (KMP) 2001 mentions these fringe areas as 'urbanizing areas' of 'basically rural and agricultural land' with an annual 2.95% conversion rate since 1998, indicating that the farmlands are gradually being converted into non-farm land use (KDA, 2014). Yet, the farmlands still attract rural migrants with farming skills.

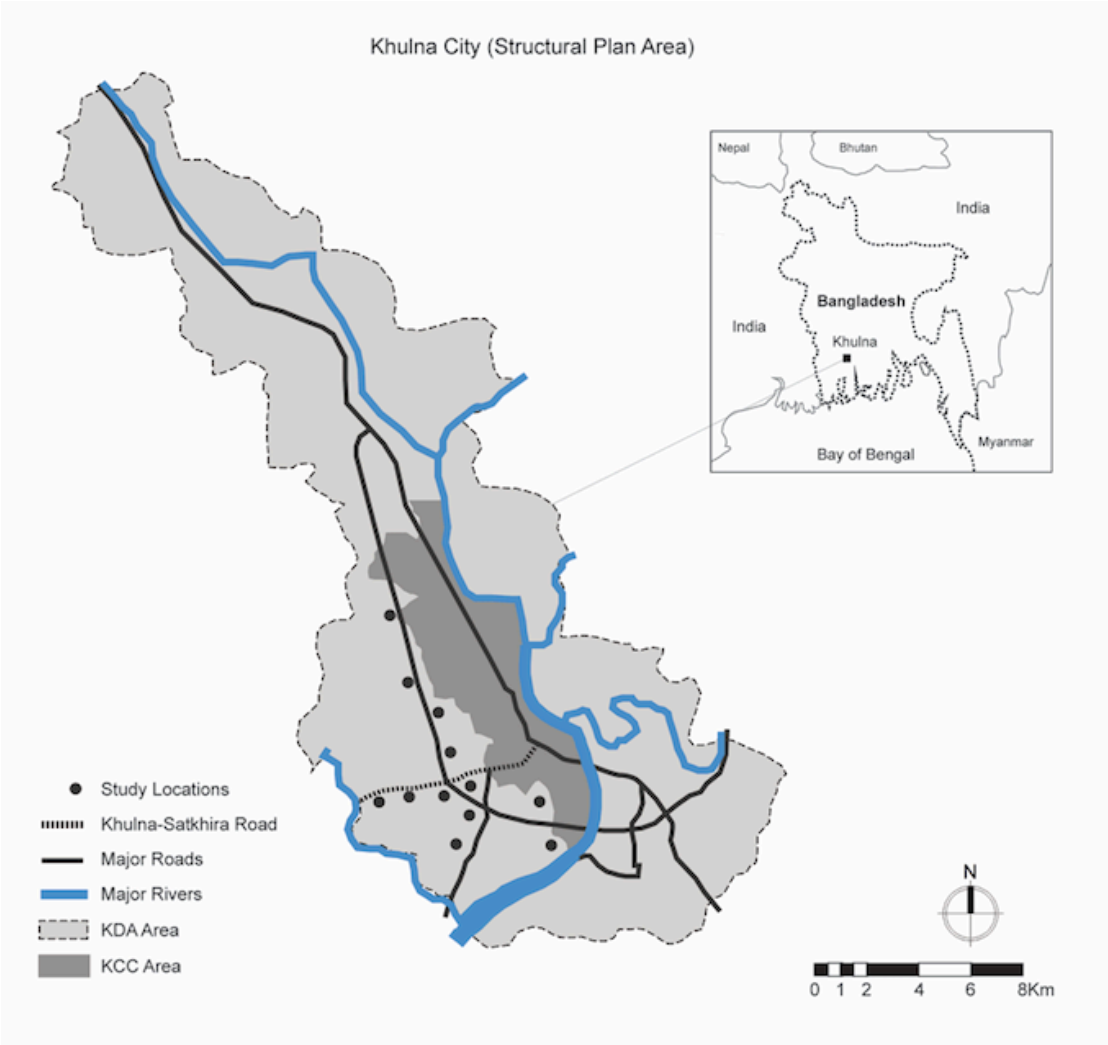

Figure 6.1: Study locations in Khulna's urban fringes
Source: adapted from Google map

Seventeen internally displaced families in twelve locations in the fringes of Khulna city were identified through explorative snowballing, building on the lead author's past knowledge and contacts in the area. These families have been living in these fringes for the past 5-25 years. All of the families have gained access to these places for shelter by entering into forms of patron-client relationships with private landowners. Thirteen homes are on privately owned land, accessed through verbal negotiations with absentee patrons. The remaining four homes are on roadsides or by roadside canals on vacant government owned land. Although the government tends to

overlook these unauthorised occupations until the land is required for public infrastructure, occupiers are still required to seek verbal consent from adjacent private landowners.[5]

Our earlier work (Alam et al., 2018) highlighted the contribution of non-human agencies in migrant homemaking both within and at the immediate borders of a patron's land. Data collected in the early stage of fieldwork had hinted that female household heads were involved in a range of livelihoods (Table 6.1). The non-human agencies of animals, plants and water in the fringe ecologies create these opportunities and draw our participants outside their homes. After Pearl's invitation to walk with her to understand how she contributes to home, we devised three day-long 'walking interviews' to further explore the place-specific dynamics and relations enacted through the participants' fleeting encounters with urban space (Hitchings and Jones, 2004: 8-10).[6]

[5] Within the existing political economy urban elites enjoy government owned vacant land adjacent to their owned lands (Barkat et al., 2001).
[6] The methodological discussion on Urry (2012) in Hitchings and Jones (2004) inspire us to develop the sensitivity of the mobile fieldwork.

Table 6.1: Female household heads' involvement in livelihoods outside home

	Mobile livelihoods	*Involved female household heads*
1	Clearing weeds	Lucky, Silent
2	Collecting trash	Delight
3	Crafting cow dung	Pearl, Grace, Seventy, Swan
4	Carrying water	Faith, Rose, Beauty
5	Preparing seed-beds	Pearl, Grace
6	Making fences	Lucky, August, Charming, Pearl
7	Crafting earth	Seven, Honey
8	Collecting snails	August, Rose
9	Collecting/selling juice	Pearl
10	Collecting leaves	Hope, Charming
11	Ferrying vegetables	Silent, Lily
12	Ferrying pickles	Beauty, Little
13	Harvesting crops	Delight, Pearl, Faith, Hope

Source: Fieldwork 2014-2015

The experiences and observations of walking interviews (mapped in Figure 6.2) are illustrated through three vignettes of mobile livelihoods – collecting trash, clearing weeds and crafting cow dung. This selection of livelihoods is intentional, as it is the agency of these 'dis-ordered' (Douglas, 1966: 35) elements in domestic settings to unsettle homes that create opportunities for our participants to engage in homemaking. Participants were followed on foot through their neighbourhoods. They found work in the domestic premises[7] of comparatively well-off families that contained vegetable gardens, fruit orchards, fishponds, farm animals and poultry that needed care. Multiple interviews took place at each setting as often two or more persons were present (e.g. employers, other family members and neighbouring female household heads who are integral to these livelihoods). All interviews were recorded on a dictaphone and the works were documented on camera.

[7] Two domestic premises that were studied for clearing weeds and cow dung occupy comparatively large areas of land (on average, .5 -1.5 acres for each home), typical homes belonging to the suburban elites.

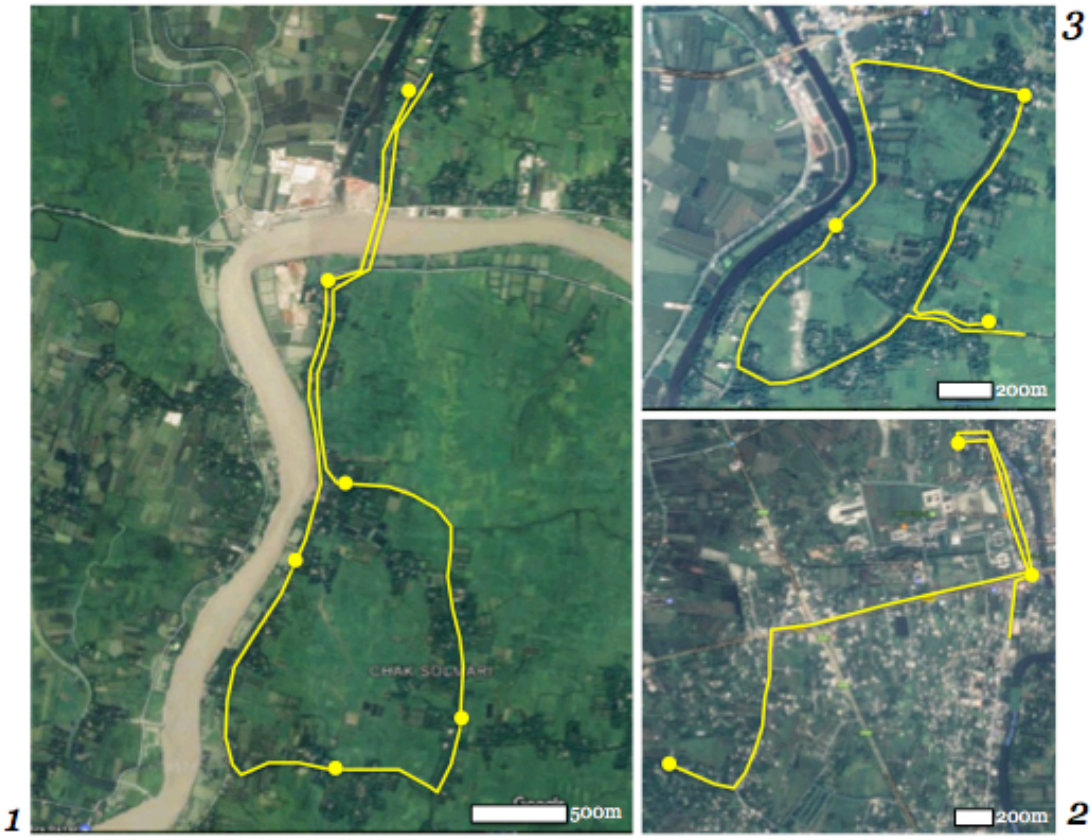

Figure 6.2: Walking interview maps (dots representing employer homes) for 1. collecting trash, 2. clearing weeds and 3. crafting cow dung
Source: Google map

Collecting trash, clearing weeds and crafting dung

The conceptual discussion of unbounding recognises that home is open to broader socio-ecologies of structures and practices of dwelling. Of the two directions of unbounding indicated by Cook et al. (2016), we focus on the one in which home is seen as open to its immediate ecologies through the experiential performances of homemakers and explore migrant women's performances of livelihoods in the ecologies outside home. The walking interview experiences at multiple homes in the neighbourhood can be described in three stages of the women's mobility – *leaving own*

home, *entering other's home* and *coming back home* – that trace the human and non-human agencies that participate in sustaining these marginal homes.

Leaving own home

Establishing connections with the broader socio-ecologies outside home requires migrant women to adopt a range of strategies. Our first walking interview starts from Delight's home. Delight's family has had access to a shelter on vacant government land for 13 years. However, securing a shelter is only one aspect of the on-going struggles of these migrant families. The male householders pursue diverse occupations (e.g. rickshaw pulling, industrial labour in brickfields) that are typically available in cities. The cultural norms of their rural origins require female members to take on more feminine responsibilities and mostly to remain within the home. Still, opportunities arise for them outside home through the non-human agencies of trash, water, weeds and leaves, plants, and animal excreta that require a specific type of labour (and skills). The opportunities are occasional, therefore they rarely attract male members, who dominate more stable and conventional sources of income.

Delight's livelihood requires her to walk from door to door in the neighbourhood. She sells household utensils (and occasionally, vegetables and plants too) to her clients. Her clients are mostly more wealthy women who 'buy' Delight's merchandise in exchange for trash (e.g. old kitchen utensils, water bottles, jerry cans,

children toys, etc.)[8]. Occasionally, Delight retains one or two items from her collection for her own domestic use (Figure 6.3). The rest is exchanged for cash in the nearby salvage shops. The profit from each cycle supports Delight's family and the capital is rolled into the next cycle to buy new items to exchange. Depending on the condition of the market, she also occasionally ferries onions, spices and plants. As she reasons,

> "I need to keep myself open to opportunities. Despite the uncertainties and troubles of living on others' land, I still need to raise a family. It is hard to rely on one's income. Sometimes, your *Dada* (referring to her husband) is out of work. So, occasionally, I need to be outbound …"

1 *2* *3*

Figure 6.3: 1. Delight just before leaving her home 2. Delight is walking to client's home 3. Delight's merchandise: collection of trash inside plastic bag (left) and new utensils (right)
Source: Author's fieldwork

For Delight and other women, moving from their own home and negotiating other homes in the neighbourhood is regarded as an important supplement to the

[8] 'Trash' here refers to old utensils and household items that are considered unusable in these relatively wealthy households and are sold to salvage shops, much like people in wealthy nations write off their old cars. However, our participants who are in financial hardship may still find ways to use them. By collecting trash Delight is running an informal recycling service to these domestic ecologies.

collective family effort in maintaining a home. In a context where male members are supposed to take on income earning productive work external to the home, Delight has to negotiate the gender specific boundaries and roles set by religious and cultural norms. As an example, on the interview day, the lead author observed Delight's husband, Shiva helping Delight organise the merchandise in the basket. As Delight later mentioned,

> "When I started going out, I could not look at your *Dada*'s (Shiva) eyes. I felt like, the family is going to be ruined the next day. However, with time, he (Shiva) has understood my contribution to the home. Now, sometimes, if I am tired after the day long walk, he helps carry the collections to the salvage shop."

However, there is never a complete detachment from home and home-making roles. Delight must embody and carry some of her domestic 'matters' and responsibilities to the outside. For example, on the two or, at best, three times in a month that Delight leaves the material boundaries of her house, she performs some of her home responsibilities while travelling. Delight packed grains and raw foodstuffs, mainly vegetables, so that she would work on them in workplace homes. She explained by pointing to the oven,

> "Sometimes I feel like wherever I go, I am still tied to this kitchen, you know, wherever I go, no matter the circumstances, the dinner needs to be served on time, otherwise, everybody will lift a finger [an expression to object] to my work."

In addition to the weight of the merchandise she exchanges, she has to endure the additional load of her own raw foodstuffs. Some work needs to be accomplished

while she is away so that the daily routines of other family members are not disrupted. She considered this essential if she wants to continue her livelihood. For these women, *leaving home* becomes possible through untangling and reorienting their identities, familial relations and routines across and beyond the traditional boundaries of home. The home extends beyond material boundaries, but the women are never quite released from home,

> "…you always have it spinning inside your head, that you have to return on time, so that nobody starves back at home. So, I can't travel further, although there might be more opportunities." (Lucky, household head)

Entering other's home

The women enter elite suburban homes to engage in economic practices by labouring with non-human agencies (such as Lucky's involvement with her employer, shown in, Figure 6.4). Lucky and her family have lived on a number of private lands in Khulna's fringes in last 20 years. Years of agricultural service to different patrons have made her knowledgeable about the fringe ecologies. She performs maintenance work in gardens and houses owned and now occupied by well-off urban families. To seek additional support beyond her patron's shelter, Lucky travels far and wide. There is no fixed routine – instead she waits for a call from potential clients. In addition to her regular works of clearing weeds and nurturing gardens, in the winter she receives additional calls to prepare date trees for juice collection. Like Delight, she has also had to stretch cultural restrictions while maintaining gendered norms and home responsibilities in order to work outside the material boundaries of her house.

1 *2* *3*

Figure 6.4: 1. Lucky (facing the camera) is at work under the supervision of her employer 2. Lucky's *da* (machete) 3. Employer's hobby garden
Source: Author's fieldwork

During the interview, Lucky was observed removing large tree limbs from her employer's garden. Although these families own gardens and hobby farms, they often lack the appropriate knowledge and skill to maintain them. Conversations revealed that the employer's family members are either too busy or simply not interested in these labour-intensive and sometimes unpleasant jobs. Instead, they keep their houses open to allow access to Lucky and other migrant women who are more familiar with the non-human agencies of plants and animals. While Lucky was busy dealing with the tree limb (Figure 6.4.1), her employer explained,

> "My daughter and I have high affinity for gardening … Lucky knows this soil far better than I do ... She would always find time at my need."

The employers' adult daughter was also present. She added,

> "We hardly know how to do things properly, say, who would handle those large cows and the dung? So, we have to outsource. Well, my *Ma* (mother) started to do some, and after about five years, only now. But it

> is still hard to do things all by ourselves. I cannot even bear with the fish. They stink. Tapping on cell phones softened our hands. Lucky's machete is too rough for us."

Lucky leaves her home to make other homes nice and tidy. The agencies of trash, weeds and pests, because of their expendable and undesirable status at the employers' homes, provide opportunities for Lucky and others to sustain their own homes. These 'dis-ordered' elements are eliminated from the domestic space of their employers in a deliberate effort to organise (and make) home (Douglas, 1966: 35; Head and Muir, 2006: 507). The suburban elites' homes retain a selective porosity to accommodate these practices, allowing migrant women into the private sphere. By continuing engagements with these expendable agencies, long-term social relations are established with employers which support the migrants' own homes with tangible and intangible benefits.

Female household heads were more competent in entering elite homes − domestic interiors where outsiders, men in particular, are seldom allowed. Women were allowed to mingle with their employer housewives in ways inaccessible to men. As women supervise these works, it was easy for our participants to obtain consent from their husbands to work in these settings outside the home. Gradually, these work relations are transformed into something more. Lucky's employer comments,

> "By now, Lucky became more our family member. She comes, works, and eats with me. We discuss many things beyond works, you know, all those feminine matters. With a male worker, it is difficult. I cannot let him in my kitchen. Also, our husbands would not waste time to

> accompany outsiders and spare on these *koore* (idle in Bengali, in a demeaning way) tasks. As I stay at home, Lucky is good company. Our home gets cleaned because of Lucky, and her home also gets fulfilled."

The demand for work was enabled by the growth and elimination of expendable non-human agencies. Workplace homes become porous and feminised sites of mutually nurturing relations based on care and convenience, binding together elite and marginal women and home ecologies.

Coming back home

Migrant women return home with many tangible resources and forms of social capital through their labour and engagements with more-than-human others at other homes. Pearl, our third interviewee, has been living in these fringes for 15 years. Unlike Delight and Lucky, Pearl is tied to strict routines of work and has to arrive at her workplace home early in the morning. It is a round-the-year routine. She has to clean the stable (mainly cow dung) and the yard. They need to look clean and tidy by the time the employer's family members leave their beds. But even before starting the job, she has to complete a couple of essential tasks in her own home. Should she wish to work outside, she must ensure that breakfast is ready for her husband and family members. Thus, both her own home and workplace homes are tied together within reflexive routines. In her workplace home Pearl gathers dung, assembles it into fuel sticks and puts them out to dry under the sun (Figure 6.5). The daily workload is reduced significantly in the rainy season. On a typical wet day, she only gathers the dung into a pit and covers it with a plastic sheet to avoid it being washed away and to contain the smell.

1 *2* *3*

Figure 6.5: 1. Raw materials for Pearl's labour, 2. Pearl's works are stacked up for sun drying and 3. Pearl is leaving for her home with her share of cow dung sticks.
Source: Author's fieldwork

On the way back from work, Pearl carries her share of cow dung sticks (Figure 6.5.3). Through Pearl's labour the animal waste is tangled, un,tangled and remade into useful resources for both homes. Dung sticks substantially supplement the fuel supply in these peri-urban homes where formal infrastructural services (e.g., electricity, gas) are yet to be implemented. Unlike typical economic activities, these jobs rarely involve any cash payment. The return is rather in-kind. The dung sticks are shared between Pearl's physical labour and the employer's ownership of the cow dung. From seven days' production, Pearl is entitled to the equivalent of one day's produce. There are variations: Pearl explained that in some homes employers were happy to give her the waste in return for having their yards cleared regularly. In that case, Pearl has to carry the wet (and heavy) dung to her own home.

There are many benefits from these processes that we consider represent unbounding. For example, during the rainy season when there is less work, participants often accomplish their own domestic work at their workplaces. Once mutuality and trust had been established, Pearl gained access to her employer's kitchen. There she can

finish cooking her family's dinner using her share of fuel sticks. Sometimes, participants are also given access to additional resources, such as the employer's sewing machine and to other irregular, year-round support when available, such as leftover food, medicine, out-grown warm clothes for winter, and even old furniture.

These livelihoods not only assemble multiple homes within material flows, but work relations also gradually mature into more affective relations that become the foundation for long-term social capital. Pearl's employer revealed,

> "Pearl is convenient for us. Because of Pearl, we do not need to get our hands dirty. Besides, we have other household duties… And, you know, there are always some bad days[9]… when your body does not want to respond to anything! Pearl then gives a hand in my family's cooking. She happily does that. I spare her a bowl of curry. Sometimes, she cooks hers in my kitchen."

Our other interviewee, Lucky, on returning from her day's work explained the long-term gains beyond the customer-trader relations,

> "*Apa* [she refers to her employer using the term meaning sister] is like our guardian. We live on other's land. It is kindness. But working at *Apa*'s house gives me the courage. If I am in hardship, I can borrow

[9] The lead author had just met Pearl's employer on that day during the walking interview. What was sensed was that she was subtly referring to her menstrual cycle when mentioning 'bad days,' however, the lead author being a stranger in the setting felt restrained from asking for clarification regarding what problems she was referring to.

> money from her. Later I can repay the loan with my labour… She also refers me to others."

All three women who took part in the walking interview supplemented the efforts of other family members, such as the husband or the eldest son, in sustaining their precarious existence as landless migrants. They were enabled by engaging with human and non-human agencies to create new opportunities and neighbourly relations. There are physical limits to these hidden efforts, as Delight reflects,

> "There were plenty of metal (trash) today. Metal is too heavy to carry; yet they are more profitable. I left a portion of today's collection at my customer's house. I shall go back to pick them up at my convenience… I wish I could *walk* more and reach far away places! But, my feet get tired!"

Based on these findings, the next section discusses the nuances of these endeavours through an unbounding frame. We also discuss the implications for housing the homeless and marginal communities in cities.

Discussion: understanding women's mobility

Using the concept of unbounding, we have examined the women's labour in collecting trash, clearing weeds and crafting dung and how some of these more-than-human elements support their home. Unbounding helps trace the broader neighbourhood socio-ecologies of multiple homes that support the structures and practices of migrant dwelling on the fringes of Khulna city, rather than focus on one

specific home or on quotidian homemaking practice in isolation. It. We have shown how, through *leaving own home*, *entering other's home* and *coming back*, women contribute to their homes by engaging with neighbouring ecologies (summarised in Figure 6).

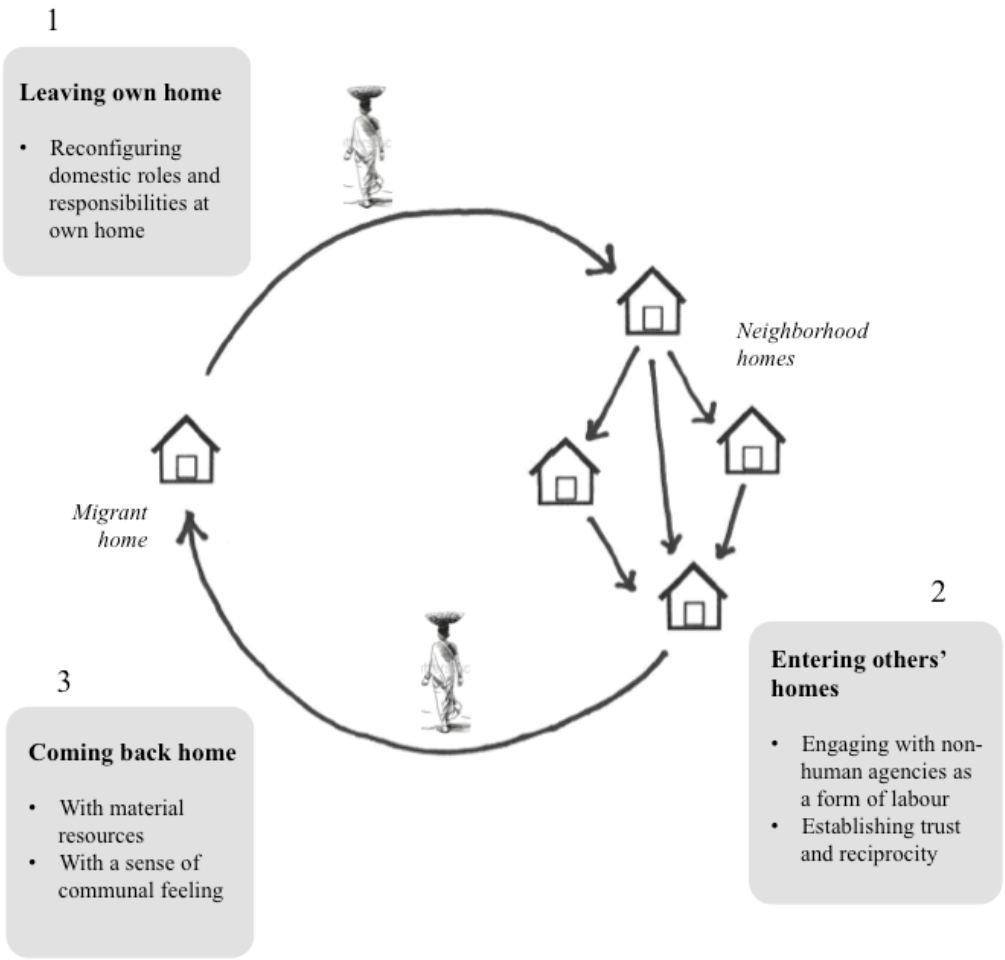

Figure 6.6: Three stages of women's mobility reproducing more-than-human socio-ecologies of multiple homes.

Source: Author

Non-human agencies have transformed some of these elite neighbourhood homes into spaces of work, binding together migrant and elite homes within neighbourly socio-ecological assemblages of mutual support. To reach the workplace

homes, the female household heads need to overcome domestic cultural restrictions before they can *leave own home*. Familial routines and responsibilities are negotiated and readjusted with husbands and other family members to enable participants to spend time outside of the material boundaries of their house. Sometimes, domestic duties need to be performed outside to manage the smooth maintenance of the home. After *entering other's home*, gradually, typical employer-employee relations are transformed into relations of mutual dependency and social capital is established. Some of the domestic duties usually performed in the participants' own homes become normal practice at the employer's home because of this established social capital and trust. At the end of the day when participants *come back home*, they bring material resources as well as less tangible social relations. These communal relations are built on non-human agencies reproducing labour at multiple homes, binding together apparently non-compatible elites and marginal migrants. They "marshal resources, expertise, relationship" (Baker and McGuirk, 2016: 432) and support for the maintenance of their respective interests of living in the neighbourhood.

Gendered dynamics play a key role in these unbounding processes in the case study area. Gender enabled access to and porosity within the elites' homes. Women hold the appropriate cultural competency to enter domestic interiors to engage in relations with such items as weeds, leaves and dung at their employers' homes. On particular workdays, for their mutual convenience both employer and employee women create labouring environments and maintain non-normative (domestic) ecologies (Gandy, 2016; 2012; Gorman-Murray, 2006) in which male bodies are not culturally appropriate; nor do the men show interest in these activities. These context-specific gendered dynamics disrupt the typical assumptions of home as spaces of 'work deficit'

(see England, 2010) as works that are productive with visible economic returns usually take place outside of home. Thus, work within home, especially by women, has remained 'invisible' (Armstrong and Armstrong, 2003). However, the domestic socio-ecologies studied in this paper have nurtured somewhat unconventional yet essential work and work relations through gendered mobility. Attending to these less discussed women's contributions and nuances can inform alternate ways to support marginalised communities in the city.

The conceptualisation of unbounding also refers to home as performative sites. It is evident in all three vignettes how participant bodies hold a critical competency to perform home by engaging with non-human agencies as a form of labour. Their corporeal ability acts as the key 'frame of reference' to determine the level of 'spatial competency' (Thrift, 2007: 104). Female householders, by regularly reaching into other homes and then collecting, clearing, crafting, and carrying non-human things, ensure a flow of opportunities to their own homes. The level of their contribution depends ultimately on what their bodies can endure. As long as Pearl's *two limbs* are able to walk outside to reach these assemblages of supports, her home continues to be supplemented with necessary support.

This analysis of women's mobility, seen through the lens of unbounding, captures the more-than-human, gendered and corporeal performances involving neighbourhood socio-ecologies. For informal migrants without stable tenure and formal entitlement to land, such performances are vital to sustaining homes. Unbounding facilitates the understanding of these migrant homes as not bound within the physical house but performed and expanded across neighbourhoods. Migrant homes appear more as a 'place' (Easthope, 2004), embodying networks of both human and more-

than-human agencies reproducing the homemakers' wellbeing, community creation and cohesion. These 'affective' experiential and emplaced relations of home are often rendered invisible within the abstract calculation of the mortgage economy or within the prevalent (human and expert) discourses of home and urban planning. In this regard, unbounding informs alternate ways of housing vulnerable communities by thinking through the non-human agencies and hidden socio-ecological relations that are performed out of sight but are essential to local livelihoods and home-making practices.

Conclusion: unbounding 'home' for housing the homeless

Inspired by Pearl's invitation to walk with her and other participants, walking interviews helped us to come to understand the ways in which migrant women engage in hidden livelihoods in the domestic spaces of others to improve their precarious home situation. We deployed the concept of unbounding (inspired by Cook et al., 2016; Cook et al., 2014) to acknowledge that the home is always inter-dependent with the socio-natural processes of the outside world. Unbounding thus highlights more nuanced homemaking practices where homes extend beyond the scale of the body to the neighbourhood. The concept of unbounding encouraged us to recognise the strategies of the most marginalised cohort, the female heads of migrant households, in negotiating urban spaces to support their homes. These women adopt many other strategies to develop livelihood opportunities (shown in Table 6.1) that we could not include in this paper. Further examination of them would highlight an array of other competencies and strategies associated with unbounding home.

The dominant planning responses for housing the homeless have been rightly criticised for focusing too much on the availability of physical shelter; therefore, they fail to recognise the capacities and resources of homeless subjects in the city (Baker and McGuirk, 2016: criticised the term as 'housing-first' model; see also Lancione, 2013; Kellett and Moore, 2003: 124). In response to this problem, our findings indicate ways to devise more context-specific and practical planning and policy strategies which would involve marginal communities themselves in responding to their need for more than simply shelter in urban space. Our findings suggest that more-than-human networks and assemblages outside of the home play a key role in supplementing marginal homemaking efforts, thus recognition of these relational agencies outside the home are as necessary as the shelter itself to increase these communities' 'spatial chances' (Lancione, 2011). However, we do not deny the importance of the material shelter. We argue that the shelter rather works as an important point of reference for homemakers who strategically explore nearby agencies and resources with which to perform home. Through taking account of the notion of unbounding, it is possible to recognise an array of human and non-human agencies, with various resources, relations and potential, that reinforce the competency of marginal homemaking subjects in cities. We argue that planning and policies should work more to reconsider the ways migrants and other marginal subjects can engage with culturally appropriate agencies to build their spatial competencies in cities.

There is further merit in theoretical rethinking of housing/home as unbounding processes. An openness to the mutual constitution and overlap of home and its outside reveals complex place-based stories of bodies, gender, nature and the culture within communities, and the many transient practices that are "embodied, embedded and

grounded" through the home (Blunt, 2007: 691). Often such nuances are obscured or misinterpreted in urban studies. More specifically, in housing studies, unbounding can provide a useful basis for approaching the home as "processual, relational, mobile and unequal" spaces (McFarlane, 2011). We also emphasise the possibility of productive debate by bringing the more-than-human urban assemblages and dwelling performances into dialogue. Unbounding can take the less visible and more 'transient' descriptions (Cloke et al., 2008) of homeless people in the city and highlight their struggles and strategies to secure homes, looking more at relations than physical shelters. Aligned with this sentiment our article attempts to highlight some unbounding experiments that are occurring in the intersection of migrants, more-than-humans, and their domestic sites in the context of Khulna. These offer many valuable lessons for developing housing studies within more-than-human frameworks.

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Informing practice

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Chapter 7: Care-full planning

Background

Chapter 7 focuses on the more practical aspects of rethinking the more-than-human home and how the study can be seen as relevant to the discussion of the city and its planning. This chapter answers the final sub-research question: what are the contributions of more-than-human home in rethinking alternate forms of urban planning from below?

In addressing this question, I adopt feminist geographers' interpretation of care/caring to argue that both caring and planning tasks embrace the notion of "maintaining and repairing the world" (Fisher and Tronto, 1990:43; see also Haraway, 1997; 2003; 2008). I further propose rethinking a fuller account of community by considering both human and non-human agencies and their interests collectively to rethink planning. Recent scholarship by Williams (2016) and Puig de la Bellacasta (2012) inform the conceptualisation of care relations to analyse migrants' spatiality in Khulna's urban fringes. This chapter also refers to Khulna city's planning context to discuss how planning interventions have lacked a situated understanding of communities, leading to ambiguous planning decisions that further marginalise them. In contrast, I demonstrate how communities spontaneously develop their own spatial processes outside formal institutions. The chapter highlights one of the core contributions of the thesis: that rethinking spaces as more-than-human care relations can build alternate forms of care-full planning for cities from below.

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Name of principal author (candidate)	**Ashraful Alam**
Contributions	✓ Fieldwork ✓ Data analysis ✓ Literature review ✓ Conceptualisation of the article ✓ Writing of manuscript ✓ Revision of successive drafts ✓ Acted as corresponding author.

Co-authors' contributions

Name of first co-author	**Andrew McGregor**
Contributions	✓ Supervised development of work ✓ Assistance in data analysis ✓ Manuscript evaluation and edit
Name of second co-author	**Donna Houston**
Contributions	✓ Guidance in literature review ✓ Manuscript evaluation and edit

Migrants in more-than-human cities: The case for 'care-full' urban planning

Abstract

Although feminist theorists in geography and other disciplines have long paid attention to 'care relations' planning theorists have only recently begun to meaningfully engage with care as a key topic for theory and practice. In this paper, we explore actually existing 'care relations' as a means of pursuing more participatory forms of planning. To make a case for 'care-full' planning we draw upon empirical research with rural migrants in the Bangladeshi city of Khulna. We show how landless (and homeless) migrants negotiate a range of care relations with actors such as absentee landowners, neighbouring elites, other migrant women and NGOs. These care relations are more-than-human in that they rely upon non-human agencies within fringe ecologies of urban land. In the absence of support from formal planning agents these informal care relations enable communities to initiate their own spatial logic. The findings are used to propose 'care-full' planning as a means of developing a fuller account of community that incorporates human and non-human agencies. Care-full planning orients planning towards less-than-expert knowledge that builds from existing relations and encourages communities to experiment and build futures. We see promise for an ontological turn in planning that approaches cities as inclusive more-than-human spaces of care.

Keywords: Bangladesh, Khulna, informal settlements, rural migrants, care-full urban planning, care relations, more-than-human, community participation

Introduction

Feminist scholarship in geography and other disciplines has long asserted the potential of attending to 'care relations' for understanding different ways of negotiating the world and for 'being together' in it (Puig de la Bellacasa, 2012; Tronto, 1993; Haraway, 1997; 2003; 2008; Fisher and Tronto, 1990; Conradson, 2011). Planning theorists, however, have not embraced care/caring as foci for articulating ethical, relational and socially just interests.[1] Caring and planning share some overlapping threads, for example, in being broadly concerned with "maintaining and repairing our world" (Fisher and Tronto, 1990:43), including people and places within it. We 'plan' to take 'care of' something that we 'care for' (Haraway, 1997:151). For much of the twentieth century, planners took on a 'caregiving' role in society through European and masculine knowledge and modernist planning ideals.[2] Later post-modern planners moved from the modernist discourse to more radical ones where planning ideals became more 'communicative' (Healey, 1999; Yiftachel and Huxley, 2000; Healey, 1992), 'community-led' (Campbell and Marshall, 2000; Parker and Murray, 2011) and openly ethical and principled (Porter et al., 2012; Sandercock, 2004). This provides openings for the participation of non-experts and communities in plan-making processes. Recent works further propose the inclusion of more-than-human communities, including non-humans like plants and animals, as planning subjects

[1] Low and Iveson (2016) are a notable exception, arguing in the context of public space that "caring for others and participating in the repair of the environment also constitutes an important dimension of social justice in public space" (p. 19).

[2] See Jabareen (2017), for a critique on planning history as public undertaking aimed at creating a better society and better city: therefore, "planning is, could or should be, A Good Thing" (Huxley, 2010: 136), a 'social project' (Sandercock, 2004); 'care' has always been implicit in the discussion and practice of planning.

(Houston et al., 2017; Metzger, 2014). This paper extends the discussion further by envisaging a form of 'care-full' planning that takes fuller account of communities to allow the participation of human and non-human agencies alike. Following Williams (2016), we propose that recognising the 'actually existing'[3] care relations in more-than-human cities can reinforce and improve the task of planning from below.

To support our proposition, we present the case of rural migrants in Khulna city in Bangladesh. Unlike the majority of peasant-turned migrants who traditionally enter urban slums (Hakim and Man, 2014), these communities take refuge in the '*terrain vague*', the relatively less regulated, 'provisional' spaces (Lefebvre, 1991)[4] in the shadows of Khulna city. Khulna's fringe areas are still predominantly rural, enabling migrants to pursue livelihoods that utilise their agrarian skills. They informally negotiate private and government owned vacant land and can remain 'floating' in fringe landscapes for years. Many of these communities are living with liminal and potentially 'ambiguous' (Roy, 2011a) statuses that are deprived of legal protection and formal planning interventions (Sowgat et al., 2016). Our paper presents three important 'care relations' that are maintained by these communities to secure livelihoods and shelter. These care relations involve absentee patrons, neighbouring elites, and fellow migrant women within the community. Entangled within these relations are non-humans whose agencies within urban-fringe landscapes enable conditions of care. Through analysing

[3] The phrase of 'actually existing' is drawn from Williams (2016), who uses the phrase to expose the value of more transformative and relational expressions of care and justice practiced in communities; as she explains, these expressions are useful in responding to injustice and neglect in everyday urban communities, further assisting in different ways of doing/being/thinking urban life' (2016: 515).

[4] With reference to Lefebvre (1991), *terrain vague* is discussed by Carney and Miller (2009) – a term for the provisional spaces that have spontaneous, uncontrolled and temporal qualities and lack formal planning activities – a term that could well be attributed to Khulna's fringes.

these spontaneous more-than-human care relations we seek to explain how marginal lives and places are sustained in cities, and make the case for more affective forms of urban planning.

To conceptualise 'care-full' planning, we combine feminist, more-than-human and non-western geographical perspectives to present caring as an ongoing interaction with the world, where care relations are situated within and beyond the false dichotomies of caregiver and care recipient, humans and non-humans. Caring is a 'species activity' of 'repairing the world' (Fisher and Tronto, 1990:43; cited in Williams, 2016:514) and care relations cannot be fully apprehended without acknowledging both human and non-human agencies (Puig de la Bellacasa, 2012; Haraway, 2008; van Dooren, 2014). 'Caring' results by forming and nurturing relationships and responsibilities through co-creation of more accountable spaces in a more-than-human 'world' (Bawaka Country including Sandie Suchet-Pearson et al., 2013: 196). From this ontological position, caring and planning are not so different from each other, as both caring and planning "involve an ongoing critical engagement with the terms of *their* own production and practice" (van Dooren, 2014:292). Caring recasts communities who "begin to perceive themselves differently, as subjects not objects… who develop a vision of a better world and who can act coherently to achieve it" (Sandercock, 2004:138-139). The notion of caring as 'world making' provokes us to consider 'care-full' planning in ways that consider diverse human and non-human agencies and interests collectively.

In what follows, we first elaborate on 'care-full' urban planning as a radical participatory approach through consideration of actually existing care relations in more-than-human cities. Often these care relations develop spontaneously through place-

specific community dynamics, creating the spaces where lives are lived. Recognising the dynamics and agencies in these relations can be instrumental in redistributing expertise and guiding more inclusive planning. We then present the study contexts and the methods used to explore three care relations that proliferate as part of the everyday struggle to secure homes in Khulna's fringes. The ambivalent roles of formal (planning) institutions lead the participants to practice care relations by engaging with non-human agencies within the fringe landscape. We argue that planners' typical detachment to these situated details leads to the misapprehension of informal communities that are inconsistent with 'good city' ideals (see Fainstein, 2014; Friedmann, 2000: for aproaches and contradictions of good city ideals).[5] In contrast we argue that care relations in more-than-human urban landscapes bear distinct 'rationalities' (Roy, 2009:86) that support and sustain urbanising frontiers of the global south. We conclude by calling for a planning orientation that is sensitive towards actually existing care-relations to initiate more inclusive planning from below.

Conceptualising 'care-full' urban planning

Urban planning has a history of viewing cities as spaces of exceptions by drawing lines between culture and nature, urban and rural, planned and haphazard and so forth. Often these lines are drawn from a distance, with planners' 'conceived' rationalities superseding 'lived' realities (Lefebvre, 1991; see also Merrifield, 1993).[6]

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[5] In critiquing the history of planning cities in the twentieth century, Fainstein (2005) recalls the era that critiqued the industrial city and attempted to re-create cities according to enlightened designed principles, Planning ideals of the good city was 'assumed to be simultaneously in the general interest and guided by experts' (p. 122).

[6] According to Lefebvre's (1991) spatial triad, the 'conceived 'spatial form refers to those abstract spaces that are conceptualised by the professionals and technocrats such as planners

Such parochial underpinnings of cities are largely made possible due to the privileging of European and masculine subjectivities and knowledges within urban planning (see Houston et al., 2017). Planning regimes today still project a 'tightly woven modernist' (Metzger, 2016a) ideal that largely responds to anticipated conditions, with little consideration of alternatives that may arise from local contextual dynamics (see details in Innes, 1996:461). As a consequence, local landscapes and lived cultures in cities are glossed over with 'disembodied (and often imaginary and exclusionary) representations' (Lorimer, 2010:239). To deal with the plethora of 'ambiguities' (Healey, 2010:12) in planning practice, attempts have been made for at least the last three decades to develop more participatory and non-expert-led alternatives (Parker and Murray, 2011; Sandercock, 2003). Patsy Healey (2010) is a key protagonist in approaching planning projects as 'matters of care' (interpreted by Puig de la Bellacasa, 2011:89-90). She sees planning as "paying attention to *and taking care of* the localised and complex spatial entanglements" (Healey, 2010:20). This form of planning requires approaching "places in ways that recognise the *actually existing and spontaneous* interdependencies and connectivities" (Healey, 2010:74) to bring about more inclusive planning practices.

Recent scholarship has furthered Healey's notion of planning as care projects, calling for a radical rethinking of the underlying theories and practice with more 'affective' and 'kindered'[7] alternatives (Houston et al., 2017; Metzger, 2015; 2016b).

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and those of 'scientific bent' (Merrifield, 1993). In contrast, the 'lived' space is the complex symbols and images of its inhabitants who enact symbolic meaning in the spatial form.

[7] Houston et al. (2017:8) suggests a planning alternative building on 'connectivity thinking' to position cities in ecological terms (Plumwood, 2009) to be alert to, and respectful of multispecies kinship in urban life.

It primarily proposes a reworking of the typically hegemonic (human) planning subject through a recognition "that there are myriads of other-than-human denizens" who also possess agency and claims to urban space (Metzger, 2015:139; Hinchliffe and Whatmore, 2006). This resonates with broader Indigenous and post-human perspectives that increasingly recognise the role and influence of nonhuman agencies in the creation and meaning of places and practices (Bawaka Country including Sandie Suchet-Pearson et al., 2013; Bawaka Country et al., 2015). By considering the urban world not as an exception to human communities and culture but "made up of multiple differences mobilised through human and non-human becomings" (Hinchliffe and Whatmore, 2006:124; see also McKiernan and Instone, 2016:489), these agencies "offer new possibilities for productively rethinking the ontological exceptionalism of humans" as dominant planning subjects or experts (Houston et al., 2017:1-2). In opposition to more masculine interpretations of planning, a different type of planning may potentially emerge, oriented around the task of "care as kinds-as-assemblages" (Haraway, 2015:162), without privileging a few experts or any particular species. Instead, the many 'enactments' and 'articulations' in those assemblages may "lead to different ethico-political valence" (Metzger, 2014:1001). Moreover, planning as caring might be more inclusive of diverse more-than-human 'throwntogetherness' (Massey, 2005).

Feminist geographic scholarship lends a critical moral and ontological position to rethink planning as caring as part of more-than-human assemblages. For example,

> 'Caring' is defined as a 'species activity' that 'we do to maintain, continue, and repair our 'world' so that we can live in it as well as

> possible; *and* the world includes… all that we seek to interweave in a complex, life sustaining web. (Fisher and Tronto, 1990: 40)[8]

Tronto's proposition of 'caring' as 'repairing the world' while living within it is a useful provocation that demands a repositioning of the planning subject within the planning context with a 'reflexive stance' (Bent, 1999:34) so that the world becomes 'knowable' as a 'collective' moral project (Puig de la Bellacasa, 2010:159). Puig de la Bellacasa (2012) draws on Haraway's evocation, "nothing comes without its world" (Haraway, 1997:137) to further explain that caring is an ongoing interaction with the heterogeneity of the world with an "unsettling obligation of curiosity" (Haraway, 2008:36) directed towards situated relations. To care about the world demands developing *adequate attachments*, or 'relations' (Puig de la Bellacasa, 2012: 198) with the 'caring subjects' to avoid the detachment that positions others as 'objects' of care. The feminist literature provokes us to consider actually existing (more-than-human) "knot[s] of relations…, intra-actions of matters and meaning" (Barad, 2007:148) as critical vantage points for knowing about the diverse 'stakes' (Healey, 2007:188; 1997) that are at play within the world. Care-full planning is then a "craft of … choreographing" (Stengers, 2005; discussed in Metzger, 2013:782,793) multiple (even oppositional) stakes within mutually "shared lines of flight" (Bennett, 2016:26) to produce space.

Understanding the role of actually existing more-than-human care relations in care-full planning can be deepened by exploring Australian Indigenous ontologies of

[8] See also Tronto, 1993: 103.

‘caring as country’.[9] In this worldview, everything exists, maintains and repairs in a state of relationality, as if the world of “human, animal, plant, process, thing or affect – vital and sapient” heals its own wound “with their own knowledge and law, …constituted through relationships that are constantly re-generated” (Bawaka Country et al., 2015:2). In this worldview, humans and others are never isolated, are not static and are known – but they always ‘become together’. This togetherness, or ‘co-becoming’, requires consideration of the ethical responsibilities of care that emerge when we live, think, act and attend as part of the world, as ‘country’, of which all are a part, rather than apart from (Bawaka Country including Sandie Suchet-Pearson et al., 2013:186). Approaching “caring as *the multitude of relationships within* country” rather than caring *for* country, care-full planning can be reinforced with more “grounded form[s] of embodied *knowledges*” [my emphasis] (van Dooren, 2014:292) that produce the world from ‘below’.

Bringing together Western and non-western ontologies to inform care-full planning requires ‘slowing down’ expert reasoning. It rather opts for “redistributing the expertise” among multiple agencies within the more-than-human world (Whatmore and Landström, 2011:606; Whatmore et al., 2011). This is the critical moment when the traditionally hegemonic (human) planning subject may be challenged to broaden the premise of care (and planning) beyond a ‘scientific bent’ (Merrifield, 1993) and

[9] It is to be noted that I only try to link together the Australian Indigenous ontologies and more-than-human perspectives as I see some resonance in the western more-than-human ontologies that call for decentring human subjectivity and emphasise one’s situated relations within the world. However, I caution that linking posthuman perspectives in general with indigenous philosophies will be highly problematic as the earlier post-human currents rely more on the deconstruction of the discourse of ‘man’ (see Agamben, 2004; Fukuyama, 2002; Derrida, 2002), sometimes leading to the political dehumanisation of indigenous ‘man’.

‘assume responsibility’ (Metzger, 2016b:145) through the ongoing relationships that are built of ‘heterotopic alliances’ (Gandy, 2012). Individual agencies, when seen from outside these relations, may appear non-conforming and with unequal competencies. However, the same agencies become entangled in ways that produce spaces in which life is lived with their own meanings and dynamics. These contextual dynamics can inform planning agendas and are often forged in and through the agencies and their ‘more-than-human relations’ (Hinchliffe and Whatmore, 2006:124). With this ontological shift, care-full planning can be seen a “venture as well as an adventure” that starts with “learning to be affected” (Latour, 2004:213) by the situated relations/assemblages – an attitude that can lead in time to unexpected knowledges and possibilities (for relations enacting knowledges and practice, see Cheney and Weston, 1999:118). Care-full planning is an experiential approach driven by internal spatial relations rather than externally-devised and imposed through expert reasoning.

These theoretical insights inform our analysis of three actually existing care relations enacted on the fringes of Khulna City. We focus on migrant communities and their care relations with absentee patrons, neighbouring elites and with other migrant women. We direct particular attention to the human and non-human agencies that constitute care relations and the spatial logics that entangle them. The case study is used to make the case for care-full urban planning oriented towards inclusive cities.

Methodology

The paper draws on fieldwork during 2014 and 2015 in Khulna city (Figure 7.1), the third largest city in Bangladesh. Historically, Khulna has experienced regional level rural to urban migration: regional migrants make up 42-44% of the population of

Khulna (see Table 2.3 on lifetime net migration 1961-1998 in KDA, 2014). The current Khulna Master Plan 2001 covers an area of 451.18 sq. km. including an expansive fringe area of 181.16 sq. km. (KDA, 2014). The influx of migrants along with economic development are has driven rapid expansion in the south-western fringes of the city along newly developed regional infrastructure lines.[10] Urban elites mostly own the land in these fringes and wait for the right time to sell or to change the land use. While waiting, agricultural activities continue through small to large-scale private investments in rice plantations, shrimp and sweet water fish farming, shrimp hatcheries and poultry. These rural attributes attract villagers from coastal areas, many of whom have been displaced by sea level rise. The peasants-turned-migrants come with farming skills that can be used in the fringe ecologies. Some take refuge in these agricultural lands through informal negotiations with absentee owners.

[10] The rapid urban expansion of the south-western fringes has been a major factor in recent steep land price increases: 40% to 900% in the last 7 years (KDA, 2014).

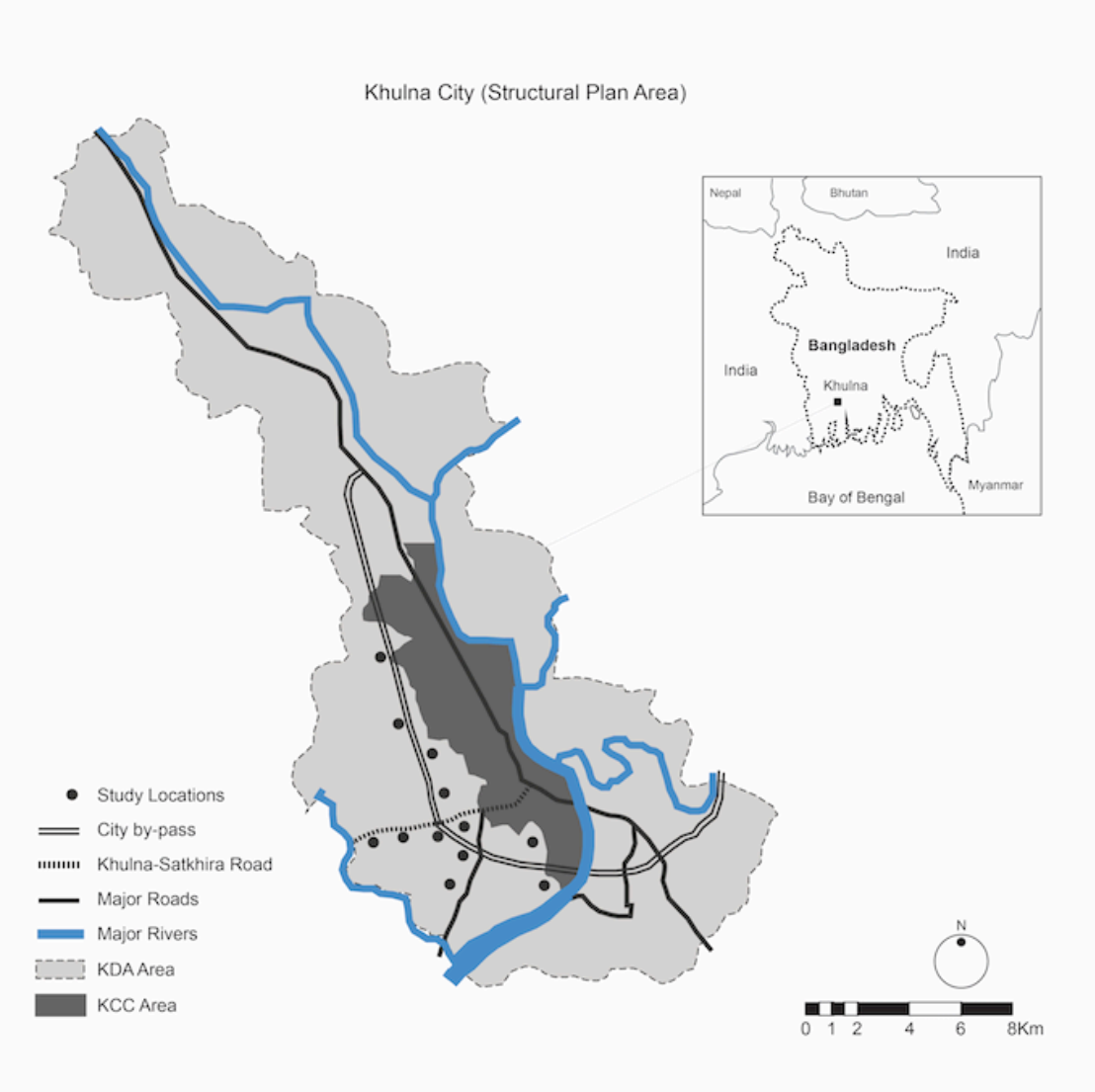


Figure 7.1: Study locations in the south-western fringes of Khulna city

The fieldwork involved a combination of methods of which the primary one was a participatory photography approach called 'photo-response' (anonymised). Seventeen displaced families spread across twelve locations in Khulna's south-western fringes (Figure 7.1) participated in photo-response. The families have been living on these fringes for between 5 and 25 years with 13 families on privately owned land and another four families living on roadside government-owned land. Within the existing structural dynamics, the families on government-owned vacant lands still need to seek

verbal consent from adjacent private land owners.[11] All seventeen families access land by agreeing to take care of the absentee owners' interests relating to the land. The female household heads mostly participated in the photography exercise and mapped the physical spaces to explain their home. Given the spatial complexities of these migrant landscapes, we also used additional performative methods, such as walking interviews involving some female household heads to explore the care relations beyond their shelters. Five group discussions were also held, involving different combinations of migrant family members and related actors, to generate more nuanced discussion of the care contexts. Group discussions helped generate shared and situated narratives that were considered socially acceptable within those communities, going beyond the individual attitudes that are the focus of one-on-one interviews (McGregor, 2004).

The household fieldwork was supplemented by semi-structured interviews with absentee landowners, academics, local leaders, government planners (from the Khulna Development Authority (KDA) and Khulna City Corporation (KCC)), planning consultants for the Detailed Area Development Plan (DADP) 2014 working under the Khulna Master Plan (KMP) 2001, officers from the land office, land developers and brokers, NGO officials, environmental scientists, activists and lawyers. In addition, desktop research was done to analyse relevant key planning documents (such as the DADP 2014). All data went through 'inductive' (Creswell, 2012) analysis in which data were fed in NVivo. Data were categorized under different nodes that entail particular themes. Further analysis of a number of nodes (e.g. patron-client relations, attachment to the neigbourhood community and supports by NGOs) helped identify 'care relations'

[11] Urban elites have significant influence on vacant government land: see Barakat et al. (2001) for details.

as sub-themes from the ground up rather than following any pre-given theoretical frame. The themes represent different aspects of migrant homemaking, of which this paper focuses on relations of care.

Ambivalent care in Khulna's planning

KDA (Khulna Development Authority) and KCC (Khulna City Corporation) are the two primary planning agencies responsible for caring for inhabitants of Khulna city (see Fig 7.1 for spatial responsibilities). KDA is primarily responsible for urban planning and development controls which rarely extend to informal migrants. These communities, including their settlements, flourish outside legal systems limiting the scope for formal planning interventions (Sowgat et al., 2016:12-13). KCC provides essential urban services to legal taxpaying agents and to some major slums "via clienteles networks and vote bank politics" (Parvin et al., 2016:88). However, KCC "does not support any other squatter settlements outside slum" (Sowgat, 2012:134). Within this local planning context, the state remains rather ambivalent towards informal migrants. As a result, planning interventions aimed at assisting these communities are broadly targeted to the urban poor without specifying migrant communities.

For example, the DADP has proposed a regimented low-cost housing project near Khulna's industrial zone (see the layout plan in Figure 7.2). The plan intends to confine economically disadvantaged communities to convenient and standardised lots near industries oriented at serving dominant economic interests, by systematically 'sweeping away' (Watson, 2009) their spontaneous spatial assembling. The proposal reflects KDA's ambivalent care for migrant communities, where project beneficiaries are broadly framed as the 'urban poor', a generic term used to denote diverse

marginalised populations. The project cost would be realised from 'the [pro-poor] beneficiaries' (see for details in KDA, 2014: section 5-3), in a market-based approach. Those failing to enroll in the market are forced to inhabit a 'residual city' (Gurstein and Vilches, 2010:433) that operates outside the official one, labouring and living in hidden and sometimes illegal spaces.

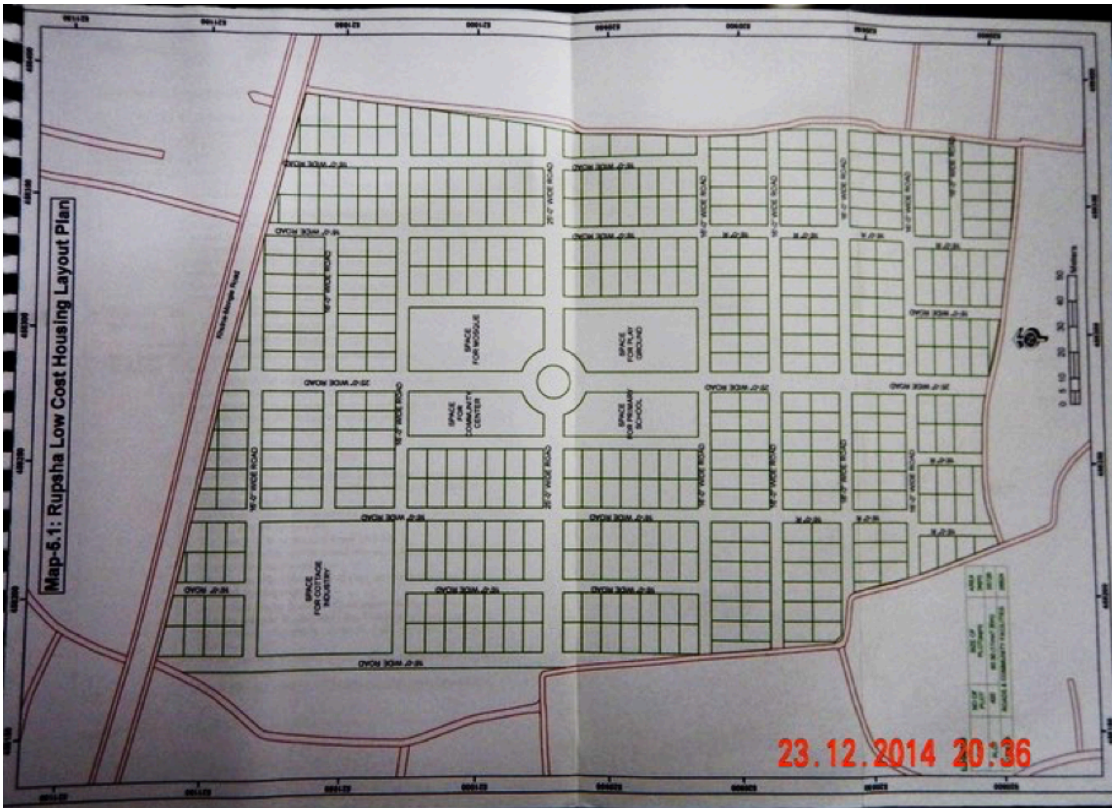


Figure 7.2: Proposed low-cost housing resettlement scheme for the urban poor
Source: KDA (2014)

According to planning experts (including KDA officials), the flawed organisational structures in local government encourage ambivalent forms of care. The top decision-making positions in KCC and KDA are held by officials with no

recognised planning qualifications,[12] limiting critical involvement in urban planning, including the complex issues of migrants who live outside the slums. The top-tier often confuse planning with zoning of physical land use and infrastructure provisioning (interview with Chief Planning Officer, KCC), so that rural migrants who live on the 'unmapped' (Roy, 2003:162) land of the urban-rural interface are ignored as 'unplannable' (Roy, 2005:147). Other capacity issues hold back these agencies, such as KDA having only three graduate urban planners who are responsible for a 450 sq. km. of master plan area (KDA, 2018) and KCC having only one planning position (KCC, 2018). With this under-resourced workforce, it is difficult to enact planning with care from the bottom up, with the result that marginal communities, including their informal agencies, continue to suffer from organisational ambivalence.

Ambivalent care is also linked to the modernist ideal of agencies that envision planning as creating spaces anew by reordering (and if needed, erasing) existing ones. For example, the inclusion of the extensive fringe areas as part of the future Khulna city was declared in Khulna Master Plan (KMP) 2001 and no consistent planning control has yet been implemented. This lethargic plan-making process has stimulated a high level of land speculation, with private actors, especially urban elites, mobilising "resources, particularly land, *[to] initiate* dynamic processes of informal" urbanisation (discussed in the context of Calcutta by Roy, 2009:80). Peasant-turned-migrants with farming skills must negotiate shelter (and livelihoods) within these 'land banks' by providing services to urban elites. However, these activities are largely invisible to

[12] See the profiles of the officials in KCC(2018) and KDA (2018).

planning authorities, and are seen instead as 'blank spaces' that await mapping. As described by an expert from Khulna University,

> "… the price increased a thousand times in places in the fringes. People of all classes now dream, dwell and duel on these fringe lands; all want to take advantage of Khulna's future development. Despite the delay in planning, there are developments everywhere, by private parties. But, whatever is being developed, KDA assumes them temporary and to some extent illegal…"

An assistant planner in KDA also noted,

> "… the private parties never waited for the plan; they always have their own plans. However, once the DADP is legislated, we hope to bring everything in order through retrospective planning approval, if not, it might face demolition."

KDA is ambivalent about any existing assemblages on unmapped lands, including the caring relations described below that enable migrants to sustain themselves. They risk being erased and disassembled through future master plans.

Actually existing care relations in Khulna's fringes

During group discussions, migrant communities revealed they had little if any contact with formal planning authorities. They did have occasional, often one-off, encounters with other authorities, such as freelance (and non-licensee) land brokers, local leaders and political parties who, in the absence of formal support, "play an active

brokerage role between migrants and wider institutions" (Lewis and Hossain, 2008:48-49; Hakim, 2013:17). However, these encounters were functional and temporary, rather than based on ongoing relations of care. As explained by Lilly[13],

> "… brokers are useful channels to locate potential landowners, but they are one-off contacts… on occasions, we knock at local leaders' door. If lucky enough, we are sanctioned with some food stuffs and clothing that come from government for the homeless, but it is so irregular and little in amount; we cannot wait for them."

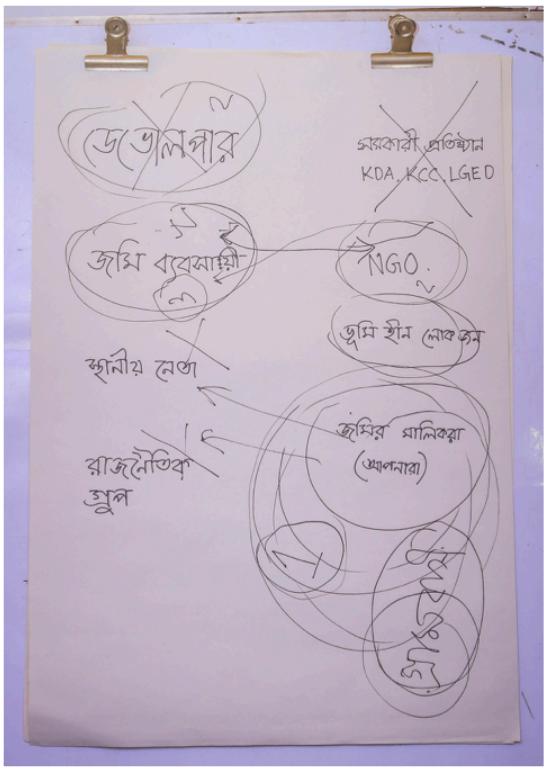
Rose, living on government land for 14 years, clarified the role of local leaders,

> "Politicians are more active and caring before elections…We are their precious vote bank, you know… However, they have a habit of forgetting afterwards…"

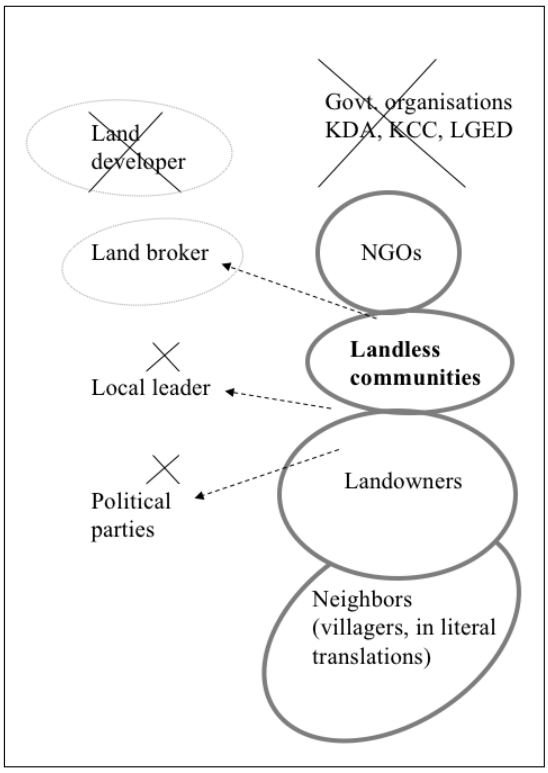
We do not consider such one-off and often one-way encounters as constituting a care relation. Instead, following Healey (2010:74), care relations form and continue through spontaneous "interdependencies and connectivity" with the agencies of a particular place. In contrast to the actors mentioned above, our participants develop "adequate level of attachments" (Puig de la Bellacasa, 2012:198) with human and non-human agencies within the fringe ecologies. These include relations formed through non-human agencies with absentee landowners, urban elites, fellow migrants and NGOs (shown in bold circles in Figure 7.3). These are essential 'ongoing interactions' that sustain homes to form marginal spaces. As acknowledged by participants, non-

[13] All original names are changed to retain anonymity.

human agencies play a central role in developing the "knot[s] of relations…" that *generate* "matters and meaning" (Barad, 2007:148) of migrant homes. In what follows we examine three care relations in detail, each organised around a different meaning: securing space, building neighbourly relationships and fostering communality.



Group discussion output (original)



Group discussion output (translated and simplified)

Figure 7.3: Contribution of NGOs, landowners and neighbours in migrant homemaking, (left: original output in Bengali; right: translated into English)
Source: Author's fieldwork

Care relation 1: securing space

A series of care relations have formed around the mutual securing of space. They involve relations between migrant families, absentee landowners and the plants and animals inhabiting that land. These are usually seen through the limited prism of the classic patron-client relationship where absentee patrons unlock land to provide

spatial security for landless migrants in return for agricultural services and loyalty. All our participants found shelter after coming to Khulna city by negotiating these types of patron-client arrangements. Migrant communities have to meet patron-defined stringent compliances to enjoy the privilege of shelter. Patrons impose strict restrictions regarding plants and animals and what should be laboured on, consumed or kept untouched. These types of arrangements have been rightly criticised for the power relations they exhibit and the exploitation that can occur (Roy, 2009:81; 2011b: 230).[14] However, while agreeing that such relations are unbalanced and can be exploitative, we also argue that by reimagining these hierarchical patron-client relationships as care relations, less discussed benefits, such as the mutual securing of space, come to light. Rather than a simple exploitative relation we argue that care is often an essential element within such arrangements with land owners and occupiers becoming bound together within cycles of reciprocity and obligations through mutual transactions of trust and service. Through such care relations both parties become resilient to diverse material and intangible vulnerabilities of urban life within the fringes and are better able to secure land for home and investment.

For landless migrants, the material shelter is secured through ensuring duties of care for non-human agencies (e.g. plant, animal and water) within the patron's land. Migrants raise livestock and crops while caring for the land to secure their homes. For example, Silent describes,

[14] See (Roy, 2009: 81) for populist patronage, and (Roy, 2011b: 230) for occupancy urbanism of the powerful actors.

> "…when you are living on other's shelter; you need to make clear what you are giving them back."

In return for a material shelter, the occupiers use their agrarian skills and knowledge. Their labour sustains the agricultural productivity of the patron's land until the land is required for other purposes. Through allowing migrants onto their land patrons benefit through the economic returns the occupiers they enable. Caring for households and pursuing economic benefits are not mutually exclusive, as Mrs. Stellar, a university professor and an absentee landowner describes,

> "Since my childhood, I cherished to live in a village-type dwelling on a large plot close to the city. I shall build my dream home here in future… Until then, I need someone to take care of the existing chalet, the plants and ponds… I can eat fresh produces direct from the field because these people know how to grow… I also feel well that one family has got some means of living because of me, and the family does the best for where it lives."

Besides securing the materials 'of concerns', such as the shelter, food, money or maintenance of land, the more-than-human presences and performances on the land also symbolically secure space for both parties. For example, an absentee owner's fence or signage gives a sense of security to occupiers, indicating the patron's custodianship and protection. Little describes,

> "…this piece of tin (Figure 7.4.1) is quite comforting. At least it feels like we have someone above our head. When you are a stranger on top

of an empty pocket it is not always safe for a family... as we are in someone's custody, nobody would touch us…"

7.4.1 Landowner's ownership signage
Content of signage:
"Purchased and owned by: owners' name, profession/social status, present address, contact numbers, amount of land"

7.4.2 Landowner's fence in the backdrop

Figure 7.4: Photographs gathered through photo-response method

Despite legal ownership, the urban fringe land is occasionally at risk of illegal occupation and/or dispossession in the absence of the owner. According to the vice-chairman of local Upazilla Parishad,[15]

"Owning land can be a heck of trouble. There are instances that unoccupied plots were sold multiple times on false deeds. The dispute on boundaries of lands is an everyday business at my office. If you are away for long, your land starts to squeeze, if not completely gone. Sometimes, local thugs harvest the produces overnight… So, you need

[15] Upazilla Parishad is the second tire administrative unit in the local Govt. of Bangladesh.

> someone trusted to take care of your stake. At least, you can be informed of any looming nuisance."

The occupiers' presence and engagement on land protects their patrons' stake while securing homes and livelihoods. Pearl and her husband point to the maintenance of their owners' fence with the use of live plants (in Figure 7.4.2) to explain the mutual dynamics of care that keep both parties resilient,

> "If we were not here… it could be robbed ages ago. Vultures are eying on these types of land. We take care of their fences... we need them as much as without us they could neither survive."

The patrons, occupiers and the non-human agencies of land are all entangled through caring relations to secure land in the fringe landscape.

Care relation 2: building neighbourly relationships

After shelter is secured, a further care relation can develop between migrant families and neighboring elites who often informally employ migrant family members for a range of services to maintain their homes, such as clearing weeds, cow dung and trash, carrying potable water, preparing seedbeds, polishing the courtyard floor, etc. These are livelihood options that connect migrant women with elite women through non-human agencies. The non-human agencies of water, trash, weeds, cow dung and other elements of the fringe ecologies provide these livelihood options. Migrant women enter the interiors of others' homes, build convivial relationships with employer housewives, and apply their cultural knowledge and skills to engage with non-human

agencies to accomplish the job.[11] These are typical economic relationships, well recognised in the context of urban informality, where informal occupation in cities is seen within a choreographed unevenness and as serving a beneficial purpose in the development of a competitive city (AlSayyad, 2004: 13). However, in the context of this paper, we argue that these banal economic relations can, with time, transcend linear employer-employee dynamics and economic narratives. An employer explains,

> "We dreamt to live on a large plot where we could have our own vegetable garden, fishpond and milking cows... But, who would handle big cows? We cannot even feed the fish… These works (Figure 7.5.1) need time and devotion, not everyone can do this… we employ Lucky to take care of our dreams…After years, she is now part of my family… Sometimes, Lucky and I visit nurseries to explore plants and seeds. If Lucky is satisfied I buy them. I have learned a lot about gardening from her. I give a hand with Lucky in the garden if I find time."

Beyond economic relations, relationships of trust and dependency are built among the employer and employee women. Employers increasingly benefit from our participants through other diverse support, such as travelling outside of home for shopping and leisure, outsourcing plants, potteries, spices and even healthcare products (e.g. cosmetics, ornaments, sanitary pads, birth control pills, etc.). Relations have deepened through increasing reliance on the participants over time. These works exceed conventional economic transactions, and instead can be considered as actually existing care relations through which women negotiate spatial confines within conservative cultural contexts.

7.5.1 Lucky with her employer

7.5.2 Fallen leaves as fuel for Hope's kitchen

7.5.3 Honey, repairing the plinth of her employer's home

Figure 7.5: Photographs of care works retrieved during walking interviews

With adequate neighbourly relations established, migrants are able to access material resources as well as psychological support beyond monetary income. Taking care of the employer's home becomes synonymous with caring for their own home. For example, expendable non-humans, such as trash, weeds, earth, fallen leaves and dung, become critical resources for migrants living in subsistence, however, these can only be accessed if adequate neighbourly relations have been established and employer housewives grant access to those resources. For example, Hope clears out the weeds, excess branches and fallen leaves (Figure 7.5.2) from her employer's garden. These are potential fuel in Hope's kitchen. Hope's husband ferries *fuchka* (a popular street snack)

which requires cooking. Hope's gatherings make a significant investment in this family enterprise. These care relations are secured through neighbourly relations, contributing to livelihoods and conveniences for both employers and employees.

These conveniences are not only always material but also sometimes psychological for both employers and marginal dwellers. Honey, while repairing the plinth of her employer's kitchen (Figure 7.5.3) explained,

> "I pat the clay against the wall, my employer (housewife) from the other side of the wall discloses her stories, her griefs, happiness… she sometimes asks for suggestions, I try to lend my best shot. Later, after work, I am invited into the kitchen. She offers me the meal. I feel like I just do not mend the wall, I mend relations. In times of trouble, these relations are my best hope."

Other care narratives also reveal that these are more than mere income generators for the participants' survival in marginal circumstances. Care brings conveniences in both material and intangible ways as Lucky says,

> "when I am in trouble, I can borrow some money and repay with my works later... we live on others' land – that is kindness, but what we build with these housewives is different, it is strength."

These more-than-human care relations develop into critical social capital to support migrant communities within urban settings.

Care relation 3: fostering-communality

A third care relation has formed through migrant housewives and NGOs. Over time, some migrant women have developed a sense of communality, encouraged in part by NGOs, and are able to work collectively to improve their condition. Skills and material resources are shared and non-human agencies mobilised to initiate alternate livelihoods. Through these care relations participants reported feeling empowered, and they collectively negotiate spaces to sustain their homes. For example, chickens and ducks are reared in shared arrangements. The expenses and profit are shared proportionately to ownership and labour. Vegetables are planted and harvested in informal shared arrangements on roadside spaces and unused corners of their patrons' land.

NGOs have been important in building care relations based on communality. A handful of local and international NGOs work with landless migrants in Khulna's urban fringes. Swan explained how the community women became activated with assistance from the NGOs,

> "They (NGO workers) came to our doorsteps; they made us aware that we were sitting inactive, nobody valued us; we had neither any say in the family nor any voice outside. They made us identify the opportunities… we did these things (such as in Figure 7.6.1) back in the village. All we needed was an extra push to have faith in our abilities; if there were a will, there might be the way."

By recognising the families' past skills, knowledge and interests, NGOs practice care by providing our participants with intangible (e.g. training and knowledge) and material support, such as animals, plants, seeds and farming tools. The fringe ecologies are suitable sites to mobilise these non-human agencies, as an NGO official noted: "these options won't work for those who are living in typical slums." The care projects start with the creation of informal 'care groups' within the communities. The primary objective of these NGO-assisted care relations is to enhance the capacity of communities so that the communities may take care of themselves later.

7.6.1 Swan's chickens and ducks 7.6.2 Fish pond

Figure 7.6: NGO-assisted care outputs
Source: Author's fieldwork

The 'care groups' foster more empowering spaces for migrant housewives in the long run. The groups are formed according to the women's past skills and their interests in prospective livelihood options such as planting vegetables, fish farming, goat breeding, rearing chickens and ducks, mushroom farming, etc. Different groups involve different non-humans and are named after the non-humans worked with. NGOs train a group leader who is selected by the group members and becomes responsible for training other members later. NGOs also provide necessary in-kind support for at least

one year to fully develop a viable production cycle. If needed, NGOs also assist in marketing the produce. The care groups build their bargaining power and freedom to explore further communal options, such as a shared artificial pond built for collective fish farming (shown in Figure 7.6.2) or shared road-side spaces for goat breeding.

These collective care relations reinforce both material and intangible benefits that enable the women to manage uncertain and marginal circumstances. They were claimed to contribute to family well-being, helping to keep children in school and contributing to savings for the future. Above all, there was a recognition among the women of their collective capacities. Charming explained,

> "If NGOs would give us only money, it would be long gone. Money also creates division. However, the courage they lent would stay with us forever..."

Faith, the master trainer of 'goat rearing group,' added,

> "We knew all these skills, but NGOs made us aware of what we could do and how we could utilise them properly. Now I know who is there to stand by me and what (indicating her plants and animals) is there to build on..."

With NGO assistance, the women have built caring more-than-human collectives to enhance their lives and capacities within Khulna's fringes.

Discussion

Our analysis suggests that migrants on the urban fringe maintain caring relations with a range of actors such as absentee landowners, neighbouring elites and fellow

migrants. These are enabled with and through diverse non-human agencies – actors that are too often marginalised or entirely absent within planning processes. In the absence of support from formal agencies, these care relations have emerged in place to sustain homes and lives in more-than-human cities. Dwelling in the fringe ecologies demands specific competencies and skills. Our participants utilise their practical and agrarian knowledge and skills to comply: non-humans become 'intimate co-workers' (Hulme, 2010:274) within labours of care. They bind together human and non-human actors to create services, goods, and tenancies, and forms of liveable spaces that should be recognised by planners. This paper highlights the value of these situated more-than-human community dynamics, the interdependencies and connectivities (Healey, 2010:74) in order to rethink an alternate more affective and participatory care-full form of planning.

The analysis suggests that these actually existing care relations support both migrant and elite homes. Care relations are reciprocal, and while the benefits differ, they contribute to collective improvements of cities and worlds. Migrant communities benefit from access to land, income and resources, while urban elites receive services, security and goods. The findings question simplistic depictions of urban elites as engaged in the exploitation of informal occupants in cities through a choreographed unevenness (Roy, 2004; 2005), by mobilising 'land' as a key instrument (Roy and AlSayyad, 2004). It is more complex than that. The case study also contests damaging static depictions of squatters as 'others', in contrast to planning's "ordered, neat spaces and thereby [seen] as a problem" (Porter et al., 2011:116; Irazabal, 2009:558); and accordingly "discounted as political subjects" (Amin, 2006: 1022). Instead we observe many dynamic relations that go beyond simple economic transactions and conventional

social hierarchies to involve shared intimacies, dependencies and support. These are critical insights in understanding the lives of marginalised communities and moving beyond misleading "classifications, compartmentalisation, and abstractions" (Lancione, 2013:237).

Contrary to dominant narratives, our study rather portrays a hopeful narrative in which elites and marginal groups spontaneously produce mutually supportive spaces by mobilising respective skills and resources. This is not to deny that exploitative relations also exist and that the migrant populations experience hardship due to their insecure status. There can be no doubt that these power relations are uneven and that life in the margins is precarious. However, we have sought to demonstrate how other relations also exist, including the more caring ones examined here, through which 'victims' or those 'absent' in planning documents are active participants in mobilizing relations to build lives and liveable space. Unfortunately, these informal care assemblages make little sense within dominant planning discourses that can be ambivalent about migrant communities in cities. Migrant communities can be disadvantaged by both non-recognition (absences within planning processes) and stereotyping (depicted as helpless victims in need of planning rescue). We argue that migrant communities like those in Khulna need less expert planning from a distance and that planners should 'localise' themselves and learn and build from actually existing dynamics of care that emerge in place (Metzger, 2014:1004; see also Lawson, 2007; Puig de la Bellacasa, 2011). Given the existing capacity-deficit in Khulna's planning agencies, the actually existing care relations offer a way of building from strengths rather than redesigning space. Human and more-than-human communities,

state actors and NGOs can collectively build a more participatory form of planning from the bottom up.

Based on the theoretical and practical insights explored in this paper, we agree with Houston et al. (2017) and Metzger (2014) that planning should go beyond the ontological exceptionalism of the human and masculine rationalist agendas. In opening to more-than-human communities and multiple dimensions of care a more 'care-full' planning ethos for the 21st century can evolve. Some steps in this pathway include,

- ***Setting a non-anthropocentric vantage point*** – It is apparent that planning in the Khulna context is more inclined to meet the needs of the privileged actors, and this in part is due to planning being traditionally understood within structural dynamics based on human actors and their socio-economic attributes. We rather propose non-human agencies as an entry point of care-full planning. Planning can then address task of unpacking "multi-directional and beyond-human-centered" (Bawaka Country including Sandie Suchet-Pearson et al., 2013:185) dynamics and agencies in already existing socio-ecological relations of care.
- ***Attending to place-specific relations*** – Planners should feel an obligation to attend to situated relations rather than privilege individual actors/agencies and abstract understandings of place. As we observe, there are relations continuously evolving and creating space through their own logic and concerns. Care-full planning can focus on nurturing and building from the actually existing narratives that bring actors together. In this way, inequalities and non-representations are given a chance to be equally acknowledged in a "web of

ongoing connections and processes in actions" (Bawaka Country including Sandie Suchet-Pearson et al., 2013:192).

- ***Slowing down expertise for experimentation*** – As we have observed, care relations require time and effort to build adequate attachments among actors in order to achieve a collective goal. We propose that planners should slow 'expert reasoning' and mobilise experimental platforms ('competency group' as an example in Whatmore and Landström, 2011) that may enable even those less-visible actors to bring everyday 'matters of care' to planning agendas. The key tasks of care-full planners' then is to establish 'subtle communications' (Dombroski, 2017:8) with communities and assist them to mobilise planning through experimenting with the 'raised concerns'.

Conclusion

Our goal in this paper was to make a case for 'care-full' urban planning by highlighting that there are actually existing care relations in more-than-human urban landscapes that offer generative spaces for the task of planning from below. Planning requires going beyond expert knowledge to situate and practice care within the world. Through the presentation of three care relations in migrant homemaking, we show how marginalised lives are formed and maintained within their mutual spatial logics of securing space, building neighbourly relationships and fostering communality. We also explained how engaging with these actually existing marginal realities are 'in many ways quite difficult for planners' as the existing elitist modes of planning continuously regard the pro-poor margins as "unplanned and unplannable" (Roy, 2005:156). We propose how care-full planning can be done by setting a non-anthropocentric vantage

point, attending to place-specific relations and finally slowing down expertise to allow and enable communities to think through their concerns. However, utopian these tasks sound, we argue that the actually existing care relations may provide a radical basis for rethinking planning for marginal and unrepresented communities in cities. Care relations provide a critical entry point for understanding not only how marginal lives are made known but also how those lives bear their own political motives and planning rationales.

In proposing 'care-full' planning, we neither want to romanticise marginal lives nor do we claim that the cases presented here are replicated elsewhere or address the many existing inequalities and deprivations suffered by marginal communities. We rather wanted to shed light on the possibilities for urban planning in the context of informal settlements that often receive little consideration. Despite hardships in these communities we found hope, and it is this hope we have sought to highlight and build upon. We also acknowledge that the call for participation and participatory planning is not new in planning theory or practice, however, rarely have participatory calls focused on care as a way of framing and understanding the production of space, and even more rarely have the non-human others that enable these relations been acknowledged in planning. We argue that with a speculative commitment to 'neglected' agencies (Puig de la Bellacasa, 2011:94) and going beyond dichotomies of urban / nature and human / non-human care-full planning can shed light on different areas of non-representation in cities, whereas appreciation of the actually existing care-relations can lead to improved recognition and participation.

Finally, we argue that this offers an opportunity for feminist geographers and radical planners to begin the arduous task of constructing a more-than-human planning

theory of care, which no longer celebrates care as the sole agencies of human, or sees marginalised humans and non-humans reduced to 'moral leftovers' who ought to wait to be cared for. Planning with a responsibility of care and the obligation of experimentation with actually existing more-than-human relations can nurture ways of multi-species cohabitation. The everyday care acts and relations that reproduce migrant homes in Khulna's fringes challenge dominant anthropocentric plans of the city, providing examples of alternate ways of reimagining and mapping the city. We conclude that marginal lives in cities should no longer be left to the sentimental preoccupation of a few professionals and their managerial instrumentality of salvaging the margins. They are better understood as dynamic spaces where unique multi-species experimentations are taking place outside the gaze of formal planning controls. They provide spaces of experimentation that can form the basis of more 'care-full' planning and politics of 'caring with'. Although the task will be a difficult one, there is much to gain from it.

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Concluding the research

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Chapter 8: Revisiting migrants' more-than-human homes

8.1 Revisiting the thesis

This thesis has brought the geographical concept of the more-than-human into conversation with critical feminist geographies of home in order to develop an in-depth understanding of the home including the more-than-human spatio-temporalities that reinforce the negotiation, continuation and making of a home. It has conceptualised the more-than-human home (discussed in section 1.2.3 and Table 1.2) as a hybrid socio-natural site of performances to unsettle binaries of culture/nature, human/non-human and inside/outside.

The more-than-human home disrupts the perception of the dominance of human subjectivity over the home's achievements so as to recognise the contribution of the non-human agencies of nature. Human-nature relations are valued for engendering collective power (and more affective capacities) to enable homemaking practice and shape the materiality of home. The home's maintenance is reliant on deliberate and unintended transactions[1] (Power 2009a) with nature by often ignoring the abstract borders (of property relations). More profoundly, the more-than-human conceptualisation opens up alternate ways for rethinking how the home is in constant

[1] The transactions include both embodied and abstract connections and flows performances, interactions and sometimes confrontations with non-human agencies.

conversation with the outside ecologies that are part of the broader socio-natural discourses of the city. These conversations inform the dynamics of home in more nuanced ways and can enhance knowledge production and planning that are undergirded by the ontological exceptionalism of human (Houston et al., 2017; Metzger, 2014).

The thesis has examined migrants' informal homes on the fringes of Khulna city in Bangladesh to inform the broad research question of how more-than-human concepts can contribute to the understanding of home/homemaking and inform planning with migrant communities. Five empirical chapters in the form of papers answer the broad research question in three key threads*: finding a method, understanding home and homemaking* and *informing practice*.

In the first thread, Chapter 3 explains the photo-response (Alam et al., 2018) that I devised for approaching more-than-human contexts with the geographic interpretations of 'response' and 'response-ability' (Haraway, 2008). I explain how photo-response helped to explore the more-than-human home by initiating multiple responses from the study participants. In the second thread, Chapter 4 explains the more-than-human politics of *complying, transgressing* and *belonging* in rural migrants' homes, explaining how the study homes are informally negotiated on the urban fringes of Khulna city. Chapter 5 explains how the more-than-human relations inside and outside the home are linked to migrants' *aesthetic, spiritual* and *economic* imaginaries of home. These imaginaries inform migrants' homemaking practices and shape the material home. Chapter 6 further explores the specific homemaking competency of migrant women to answer how they negotiate livelihoods within the broader urban ecologies through initiating processes of *leaving own home, entering other's home* and

coming home back. Chapter 7, as the final thread in informing practice summarises these migrant spatialities as three care relations for *securing space, building neighbourliness* and *fostering communality*. The chapter proposes that rethinking these more-than-human relations as care relations can potentially inform planning of inclusive cities from below.

It is not the purpose of this concluding chapter to reiterate what I have summarised in the individual papers. Rather, I take the opportunity here to bring together the different themes and overarching learning in the thesis, demonstrating how the more-than-human approach recasts new ways of researching, appreciating, living and making a home in more-than-human cities. I wrap up this discussion by acknowledging some specificities and partialities. Finally, the dissertation suggests some further lines of inquiry, firstly, for experimenting with more-than-human methodologies and rethinking the more-than-human home, and secondly, their potential contribution to rethink cities. I show that the project's focus on these informal case study homes located in the intersections of multiple 'margins', including the more-than-human, have furthered critical feminist and more-than-human geographical knowledge.

The structure of the following sections follows the organisation of the three key threads outlined in Section 1.4 of the introduction chapter.

8.2 Doing more-than-human research

The dominant humanist research attitude uses a specific gaze to examine the home and homemaking practices, in which agencies of research are thought as held by human communities, typically a few experts. I have consciously attempted in this thesis

to shift away from such a domineering approach in research and to acknowledge that the world we live in also exceeds human control and representation. Recognising the more-than-human 'turn' that calls for rethinking the "complex human-nature relationships as contingent and layered processes, and the world as projects of human and more-than-human cohabitation" (Dowling et al., 2016b) I have tried to approach this thesis differently. I have put aside my 'expert' frame and created 'spaces' (ibid) for experimentation where the agencies of humans and non-humans alike have an opportunity to actively contribute to the research process and generate data. Through the core methods of photo-response and walking interviews, I have tried to activate the "socio-material eventfulness" (Jacobs et al., 2012: 131) in these domestic settings that enabled my participants to respond to the entangled human and more-than-human agencies of home. They inform different aspects of the home by thinking through the dynamics of non-human agencies and more-than-human relations in shaping, contesting and constructing the material and imaginative home. For example, the tables and figures in chapter 3 and chapter 5 provide an in-depth documentation of how non-human agencies inform homemaking practices, and the meaning and materiality of the home. The documentation combines visual materials (photographs, hand sketches) with accompanying verbal narratives that depict different domestic spaces of practice. The walking interview data also generates a combination of non-verbal materials and multiple interview texts that were collected through enacting performances in the actual settings of practice. The experimentations pose some important learning for doing 'more' in more-than-human research.

Beyond the benefit of a more localised understanding of migrant homes within the thesis, the experimentations raised some key issues that need to be considered in

doing more-than-human research in future. Firstly, the methodological experiments demonstrated the importance of the researcher keeping herself open to anything that was produced by participants as data. As experienced, even (the apparently) most non-compliant photos have constituted data when participants discussed them. For example, not one single photo taken by participants and used in this thesis portrays a complete picture of their physical shelter. In fieldwork that aims to explore the home that the researcher perceives as a vivid material object, and when the generated data (photographs) do not correspond to such perceptions, there is an ensuing anxiety until the data is fully unpacked by the participants themselves. After the photographs of (flowers, cow dung, leaves, water) were completed through cross-referencing with the texts, the home became legible with many unexpected nuances that were found to be as meaningful and important as the material home. Such experience in fieldwork suggests that doing more-than-human research is a 'risky' venture with the researcher having less or (sometimes) no control in the research process (e.g. when participants are on their own capturing photos without the researcher present); however, in the end such risk-taking proved to be worthwhile.

Secondly, the fieldwork has shown the importance of 'complicating' the data collection process in the resources and time available so that multiple moments of 'responses'[2] ensure knowledge of the more-than-human research setting. In particular, practices and places are contingent upon routines; they are temporally and spatially dynamic. For example, the practices presented in chapter 6, follow routines that differ from those of a typical home; they also occur at multiple places. Multiple non-human

[2] See the discussion on responses in chapter 2 and 3.

and human agencies are encountered in those practices, and each encounter may introduce different participants. This is an interesting outcome, as the intention in more-than-human positionality is to explore place-specific data through situating 'messy' (Law, 2004) experimentations in the settings where the data is spatio-temporally contingent; therefore, the data is more complex and may not be revealed in its wholeness in a single encounter. Hitchings (2012) has proposed taking a 'serial' approach to researching practice by highlighting the importance of multiple encounters in completing the data. Taking on board these expectations in photo-response, I enabled a series of non-verbal, verbal and performative encounters by participants in the data collection process. Later, walking interviews were combined with participant observation to enable a detailed understanding of the practice settings. The data was further reinforced through multiple interviews with other actors who were integral to these practice settings. Overall, the experience in the field suggests that more-than-human fieldwork requires a comparatively 'slow' approach in which complicating the field with multiple experiential methods is necessary to capture the spatio-temporal contingent upon more-than-human agential accounts.

Another important outcome was derived from the use of 'technology' when doing more-than-human research. The use of technology enhanced the data collection process as the disposable cameras triggered more informed responses to the more-than-human field among the participants. Chapter 3 described how the photographs generated important prompts for participants to recall their encounters and reflect on the more-than-human home. However, there are some potential 'traps' as technology comes with its own baggage of 'risks' in representations and bias in collecting data. Kindon (2016: 501) cautions that sometimes training and instruction on camera

technology may impose the often-unquestioned adoption of standardised photographic norms and 'constrain alternate ways of looking'. I attempted to minimise the risk by keeping instructions to a minimum. Instead, I observed a somewhat unexpected risk in representation that arose from this comparatively 'slow' process of data collection that required a significant commitment of engagement with the technology. Chapter 3 detailed how two cameras were given to each family with the expectation that both male and female households heads would be encouraged to become involved in photographic activities. However, mostly female household heads showed commitment and participated in the research process.[3] This kind of unanticipated turn in working with technologies reinforces two major issues. Firstly, it reinforces the importance of revisiting and supplementing the fieldwork with other more traditional methods (e.g. group discussions) so that the risks of non-representation or mis-representation can be minimised. However, this proved to be useful for attaining more detailed nuances of the more-than-human settings as female household members are more involved in these human-non-human 'contact zones' (Haraway, 2008) compared with males who are busy at 'work' and remain largely detached from these home ecologies.[4] This points to the second precaution regarding the use of technology when doing more-than-human research. It is important to identify those participants who are appropriately situated in the 'more-than-human contact zones' to navigate with the technologies.

Together, both my personal experience and the research outcome suggest that it is undeniable that there is a need to do 'more' (Dowling et al., 2016b) to supplement

[3] However, in the later phase, during more traditional interviews, such as during reflection on the photos, and during group discussions.
[4] See economic imaginaries section in chapter 5.

the humanist repertoire of typically verbal modes of inquiry with other non-verbal, experiential and performative methods. However, they need to be navigated with an awareness of the potential risks of uncertainty, and the researcher's lack of control and participation.

8.3 Knowing the more-than-human home

A second set of contributions made by the thesis is in the different ways home and homemaking are understood by thinking through human-nature relations. The five chapters (3-6) contribute to this understanding by documenting different aspects (e.g. politics, practice and materiality, capacities, practicality) of these homes in the Khulna context. More-than-human relations have offered useful 'vantage points' (Haraway, 1988; 1991a) to recognise how non-human agencies have mobilised homemaking practices and shaped the materiality of the home. Beyond answering the five sub-research questions, this section further discusses the contribution of the thesis under four themes that extend the critical feminist and more-than-human geographical scholarship of home and homemaking.

8.3.1 Home culture and non-human (politics of) nature

Dominant views have established the home as a human achievement. In contrast, the more-than-human home acknowledges that non-humans contribute through their active agencies. Significant works have highlighted the co-habitation discourse mostly by portraying human-animal companion relationships (Shir-Vertesh, 2012; Power, 2008; Fox, 2006). In general, these studies have depicted the narratives of living in Western 'modern' homes with 'animate' non-humans that enjoy some level

of autonomy through the ability to establish (non-verbal) communication. My thesis sits outside these companionship narratives to present instead a number of non-modern homes. It expands the list of non-humans to include mundane plants, herbs, fallen leaves and tree limbs, street dogs, dirt, weeds, earth and water, that circulate 'vitality' (Bennett, 2010), capacity, properties, and rhythms (Gregson et al., 2007a; 2007b; 2009) in domestic spaces and inform the politics of the home (chapter 4) and homemaking practices (chapter 5). Chapter 4 in particular highlights how nature brings its own agencies of politics to unsettle the apparently linear patron-client hegemonic 'anthropolitics' and through the home further binds these different categories of humans and non-humans with reciprocity, mutuality and obligations.

The thesis expands the discussion on politics, as often there are soft criticisms that although non-humans have political potential, their political potential has remained somewhat under-developed in the more-than-human approach (Whatmore, 2004). The thesis has made significant contributions to how non-humans inform more affective agencies of politics through marginal communities establishing more-than-human relations that have at times disrupted the dominant patron-client politics. Human control has been found to be less applicable to these homes. Chapter 7 further presents the more-than-human home as (more) emancipatory political projects that have produced shared spaces of care at multiple levels beyond the home. Studies (Wood and Young, 2015; Ruming et al., 2012) have indicated that homemakers' engagement with wider ecologies often create a sense of place that situate the home as not only a cultural project, but also as a political project. The thesis provides important insights into how more vulnerable and economically marginalised communities can participate in a politics of space in cities if they have the opportunity to enhance their social capacities

in the company and modality of non-humans. More-than-human homes are potential sites to accommodate such politics.

The thesis depicts some interesting ways in which human culture and non-human agencies of nature intertwine to create homes that we often identify as solely human constructions. For example, in chapters 3 and 4, the flowers' blooming cycle or the pond water signal a healthy or unhealthy home, thus the agencies of nature inform home maintenance routines. These beyond human-centred communications 'ecologise' (Latour, 1998: 234)[5] homes within an assemblage of relations that are more-than-rational. Unlike Western modern homes, where nature-culture connections are often made through stages of deliberate 'abstractions' (Kaika, 2004)[6], the study homes have revealed more 'non-modern', relatively less-'purified' and less-'translated' interactions with nature that are valued and engaged with. The migrants' previous farming lifestyle and inherited cultural norms inform these engagements. Chapter 4 detailed how the village agrarian cultural norms of migrants inform the ways non-human plants (e.g. medicinal plants, sage trees, ceremonial plants) and animals (e.g. the cow or the canine species) are celebrated and valued in these domestic settings. Overall, this evidence not only reinforces that certain non-humans are embedded within the human cultural construct with meanings, purpose and values attached to them, but also taking these non-humans as vantage points can create opportunities to talk about those cultural practices as a more-than-human home.

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[5] Latour (1998) defines 'ecologising' as following a network of actants or 'quasi-objects', opposite to those assembled within the process of 'modernism'. (p, 234).
[6] For example, water is chlorinated, purified to flow within modern homes, and hidden in pipes and walls, therefore its actual natural forms and presence is concealed and hidden from everyday domestic gaze (See Kaika, 2004).

The thesis also expands the discussion of home's materiality beyond the typically focused domestic spaces (e.g. gardens)[7] in more-than-human research. Chapters 3 and 5 engaged in discussions as to how material domestic spaces are formed through human-non-human collaborations and flow. The thesis has emphasised imagining the home in somewhat neglected spaces, such as shanty back alleys, kitchens, entry steps, fences, street fronts and the edge of the pond, that are sometimes seen as negative spaces. They are not deliberately produced; but are a by-product of the consciously designed primary domestic spaces. These typically non-conforming spaces in the domestic setting are activated by human-non-human collaborations; they are valued as critical for creating spaces of food production, work places for women, storage sites for fuel and so forth. Non-human nature in these homes disrupts the humanist home-culture and expert mode of construction of spaces often aligned with real estate value. In contrast, the thesis highlights a different aesthetic and organisation of the home that is beyond human and expert-centrism; these domestic spaces represent more embodied ways of living and making a home, and reflect those vernacular aesthetics and culture informed by non-human nature without establishing dualism and conflict. A critical question can be raised as to whether a more-than-human aesthetic of home could inform decision-making and home design. Could this transform the apparently 'less beautiful' spaces of the city into productive spaces of human-nature co-living and inform more inclusive nature-culture living in cities? The thesis reinforces the notion that non-human agencies can mobilise different politics of space to bypass

[7] Several geographic works have explored human-non-human encounters in typical and more predetermined domestic spaces, such as gardens (for example, Ginn, 2014; Head and Muir, 2006; 2007), with some exceptions in Power (2009a) who explores encounters in unconventional spaces, at the liminal borders of the home.

the ‘anthropolitical’ and the neoliberal ‘gaze’ and thereby rethink the home and urban space.

8.3.2 Home, gender and body

Geographical scholarship of the home has discussed the home as gendered (Chapman, 2004; Llewellyn, 2004; Dowling, 1998), as a strategic space to stereotype certain gendered presences and devalue their practices. For example, Gorman-Murray (2007a; 2008) have disrupted (and sometimes reconfigured) the heteronormative family home and the gendered stereotypes. The works explore different meanings of home through the experiences of being gay or lesbian in contemporary society. Women’s position, in particular, is “shaped by different and unequal relations of power, and home as a place that might be dangerous, violent, alienating and unhappy rather than loving and secure” (Rose 1993). Blunt (2003) further argues that humanistic geographies of home have especially failed to analyse women’s roles within it. I do not contend that the more-than-human home eliminates discrimination that women have faced historically. The thesis rather reinforces that the more-than-human relations involved in being and making home are still deeply embedded in human social structures and relations. In ways, the thesis has highlighted the more nuanced gendered dynamics of the more-than-human home by presenting the struggles and strategies of migrant women in navigating the human-non-human contact zones. It is evident especially throughout chapter 4 (in the discussion of economic imaginaries) and in chapter 6 how these women have continued to live within strict cultural and social prejudices that often restricted their freedom. But sometimes they are also able to create more liberated spaces for themselves within and outside the home. It is also notable that the non-human

agencies of these home ecologies have shaped the gendered dimensions of these homes in some contradictory ways. On one hand, it is evident that the non-human agencies of trash, weeds or cow dung (in chapter 6) have created economic opportunities that have drawn women outside the home. In responding to these opportunities the female household heads have been motivated to break free from prejudices. On the other hand, some non-human agencies (e.g. leafy fences in Chapters 3 and 5) have further confined them. In some cases, non-humans have unsettled the traditional gendered roles in domestic settings when female household heads have stepped outside for work, whereas in other cases (in chapter 6), male household heads have provided additional support to their spouses so they can seek work outside the home. Overall, through the presentation of these various nuances, the thesis has depicted the more-than-human home as having contrasting gendered identities and relations.

The thesis has also revealed corporeality as a critical element in making the more-than-human home. Previous studies have recognised that bodily encounters with non-humans (Power 2009a) contribute to the imagination of home's borders by separating homely spaces from unhomely spaces. My thesis explains several implications of rethinking the role of the 'body' in more-than-human homes, particularly those in marginal circumstances. First, it is clear that human-non-human bodily mobility and labour have enabled more practical aspects of the home, such as securing resources for the home from across the fringe ecologies and others' (neighbours' and urban elites') homes. Second, the consumption of some non-human agencies (e.g. fruits and fish) are spatio-temporally restricted by absent patrons in order to establish a sense of control over the sheltered subjects (see chapter 4, for the discussion on the politics of complying). Third, certain plants within or outside the

patron's shelter that do not conflict with the patron's interest have also nourished human bodies through beautifying, healing or reducing hunger through direct consumption. Fourth, particular gendered bodies and bodily abilities are identified as having critical competency to perform livelihoods that contribute to the home's long-term sustenance. As described in chapter 6, these bodily relations contribute to the creation of social capital and communalities in the neighbourhood. The bodily engagements with non-human agencies of the land are found to contribute to the homemakers' sense of belongingness to these home ecologies (detailed in chapter 4). All these bodily achievements reinforce the conceptualisation of the more-than-human home as a site of corporeal performances in which bodies are critical for negotiating, dwelling, securing and maintaining the home.

8.3.3 Home and work

Home has traditionally been recognised as a sanctuary, a place of rest; its connotation is often the opposite of more traditional work that generates tangible economic benefits. Work that takes place at home has traditionally been devalued until recently as homes have become a site for work via the Internet. However, the dominant imagination of the home remains positioned as a space opposite to the workplace (see exception in Kellett and Tipple, 2000; Shillington, 2008). In line with feminist critiques, my thesis significantly disrupts this home-work binary. Non-human agencies are found to mobilise the home as a hybrid socio-natural site that is constantly reproducing more-than-human labour within the home and contributing to many tangible and intangible economic benefits. All the case study homes were secured by agreeing to work on a patron's land where the home was physically placed. The homes were secured through

more-than-human labour on the land thereby maintaining the economic potential of the land. Chapters 4 provided details of how different products from the land are seen to contribute to the landowners' return on their real-estate investment. As long as the landowner's different interests are secured by migrants labouring on the land, the home can remain on that land.

Chapter 6 also presents a contradiction between home and work. It is evident that for participant homemakers it becomes necessary to move beyond their own home and become tied to another's home in the neighbourhood to reproduce their more-than-human labour by engaging with the agencies of trash, animal excreta and weeds. I discussed this in chapter 6, using the concept of unbounding to show how different homes in the neighbourhood are freed from predefined cultural norms and specificity to benefit the female household heads as economic subjects. However, unlike typical economic practices, where people move outside the home to seek work, the examples suggest that female household heads still remain spatio-temporally and materially bound to their home's routines and their commitment to family members. They carry raw foodstuffs to the workplace homes and if time permits they are required to perform domestic jobs in the workplace homes. However, chapter 5 gives some indication that due to existing patriarchal structural dynamics, there are occasions when this work and its contribution to the home is less valued. Male members sometimes remain ignorant about their spouses' economic capacities, until they are unemployed and become more aware of these economic activities. The multiple non-human agencies establish these domestic ecologies as critical work sites – these interesting insights revealed through the more-than-human home expand earlier feminist home-work dynamics.

There are other more tangible home-work dynamics presented through the thesis. Chapter 4 shows how the female household heads tend to gradually extend their appropriate economic opportunities: at first they start a shop on the corner of the home. If the patron objects they move the shop across the road. However, this does not cut off their ties to the home. Sometimes, kitchen spaces also move outside the home along with the shops so that women are able to maintain economic activities at the same time as maintaining domestic cooking. Chapter 5 explains how neighbours connect and are involved in sharing different economic practices by mobilising non-human agencies inside the home and, sometimes in the adjacent street. Thus different spaces within and across the borders of home are transformed into economic spaces. Chapter 7 expands the discussion further to reveal how these economic activities become more organised through the formation of care groups with the help of NGOs and these home-grown economic enterprises are then connected to the market.[8] Migrant women become more organised, and develop a sense of communality and strength in adapting to the city. In these ways, the thesis shows how the more-than-human home disrupts traditional home/work dualities and transforms them into economic spaces where female subjects develop with the non-human as economic subjects.

8.3.4 Homemaking beyond home

Writings on the critical geographies of home have discussed homemaking beyond the home by acknowledging that relations that constitute the household are not spatially confined to the material dwelling only but "via continually (re)assessing,

[8] There are other instances within less than 20 km in other sites (not involved in this thesis) where women make sun-dried mud tiles at home and with NGO intervention these tiles are exported in Europe.

(re)shaping, and (re)structuring' spaces negotiated outside the domestic space (Moss, 1997: 24). The home is imaginatively and materially performed across the scale of "the body, household, city, nation and the globe" (Blunt and Dowling 2006: 22). Massey (1992: 14) has argued that the home is always spatially open to outside, "constructed out of movement, communications and social relations". By foregrounding the active agencies of non-humans, my thesis has further expanded the more-than-human home's multiple transactions with the outside through different scales and spaces. Chapters 3, 4 and 5 presented a range of instances to acknowledge how more-than-human homes extend to the immediate outside. Chapters 6 and 7 further discussed how, having been influenced by non-human agencies from the fringe ecologies, homemakers engage with other agencies and actors within the scale of the city to perform home. The networked existence of the home within multiple imaginations and materiality in a number of sites beyond the home unsettles the previously imagined dualistic private/public divisions of the home. My thesis expands the discussion of homemaking beyond the home as these more-than human homes seem to take place by navigating the fringe ecologies as 'semi-public' spaces by generating mutual (and sometimes, communal) economic relations without which the homes cannot exist. Through the availability of non-human agencies potentially contributing to more-than-human labour in spaces at the immediate borders of home, in other's homes and across the city, all these spaces beyond the home offer the potential of home and homemaking.

The relational nature of the home not only disrupts the previously assumed home's spatial fixity and opaque characteristics, but also offers interesting insights for rethinking housing of marginal communities in cities. Some studies (Dayaratne and Kellett, 2008), although lacking a more-than-human focus, have discussed how in

marginal circumstances a home's resources, or what my thesis has described as a home's 'affordances' (Gibson, 1979/1986), are often drawn from the surrounding environment. More recent studies have criticised the prevailing physical shelter-centric or housing first approach for housing economically marginalised communities in cities (Lancione, 2013; 2014). My thesis further reinforces the concept that acknowledging the homemakers' engagement with the broader more-than-human assemblages beyond home is as necessary as the physical shelter itself for a community's negotiation of liveability in the city. Both chapters 6 and 7 make it clear that in marginal circumstances, connections with the home's environs are necessary to maintain critical social capital and resource flows that are built on particular gendered competencies. My thesis makes precise arguments that the more-than-human home unsettles the borders, property relationships, ownership based access rights and so forth, to reveal how those in marginal circumstances who negotiate nature well can better secure the affordances of home. These aspects of more-than-human homemaking beyond the house are in need of appreciation.

8.4 Making the 'care-full' city through making home

The third major contribution the thesis has made is in proposing alternate modes of practice by thinking through the more-than-human home. The thesis has presented many nuances that position the home as a site for nurturing care for multiple humans (e.g. patrons, neighbours) beyond the typical familial relations and multiple non-human agencies that are a part of the broader urban ecologies. As I have described at many points throughout the thesis, the care relations depicted in these study homes go beyond the companionship discourse that has contributed to rethinking the meaning of home

and familial relationships in Western homes. However, some recent scholarship has extended the companionship discourse by rethinking the broader political economic and institutional narratives of homemaking in urban space. For example, Power (2017) has shown the implications of pet ownership within increasingly insecure rental housing market in Sydney. Studies such as this provoke the need for rethinking more practical implications, such as how the more-than-human home can inform a more inclusive and multi-species city. The thesis has made the explicit point that the more-than-human home and homemaking circulate and nurture different relationships of care at multiple levels. For example, chapter 4 depicts how the more-than-human home takes care of the body (turmeric plant and herbs taking care of bodies and skin). Other exchanges also highlight the human-non-human reciprocal care relations that are established at the household level. The care relations bind together multiple humans (patron and the sheltered, the neighbours) extending these assemblages to the neighbourhood and beyond. The thesis has throughout discussed different relationships of human-human, human-non-human and human-organisations that are central to the strategies of securing home. These are summarised in chapter 7, which argues that these existing care-relations have wider practical implications for rethinking the city.

With the hope that the more-than-human home may have more practical implications for making our cities, chapter 7 grounded the findings within the different feminist geographical and non-Western philosophical interpretations of care. The thesis has proposed that if caring is what species engage in to repair and maintain the world so that every 'body' can live comfortably within the world, different forms of care relations that have spontaneously flourished with their own dynamics of relations and agencies can be a potential entry point to rethink planning these spaces from below. In

this regard, the thesis makes the provocative claim that more-than-human homes, being central to nurturing these care relations, not only expand the politics of homemaking, but also help rethink broader urban planning and politics by reinstating cities as 'care-full' multi-species and affective spaces that take a fuller account of communities of humans and non-humans, expert and lay, elites and margins and many others. The more-than-human home can be a useful apparatus to mobilise a non-anthropocentric and non-capitalistic politics of space with affect and challenge expert-led methodological 'fetishism'[9] to understand and remake cities.

8.5 Wrapping up: specificity, partiality and future research directions

In understanding the migrants' homes from a more-than-human perspective and its implication for cities, I asked five sub-research questions that inform ways to approach more-than-human research, more-than-human politics of the home, more-than-human practice and materiality of the home, more-than-human competency beyond the home and, finally, the implications of these homes in practising 'care-full' planning for cities. The summaries presented above show how the work achieved in this thesis contributes and is linked to the broader feminist and critical geographical scholarship that employs a methodological approach to the home and homemaking. I acknowledge that the five chapters are not necessarily sufficiently conclusive by only answering the sub-research questions; rather the generated data are rich and contain

[9] For example, see Davidson and Iveson (2015), Angelo (2016) and Angelo and Wachsmuth (2015) on the critique of conventional approaches in understanding the city, that have sometimes been referred as 'methodological cityism'.

many layered sub-themes and other dimensions of the more-than-human home, which with further research could provide additional knowledge in this line of inquiry. While my commitment to understanding how one of the most marginalised cohorts in Khulna's fringes makes a home has been reasonably fulfilled by answering the five research questions, I also acknowledge that the thesis is specific and partial in a number of ways.

In particular, the project is geographically specific. Firstly, the research explores human-nature encounters outside of the homes typically researched in a wealthy Westernised context.[10] Little research has been undertaken from a more-than-human perspective in the context of the non-West. The study homes are lived in by economically challenged rural migrants living in multiple margins of the city who are seen as not conforming to the mainstream urban narratives in the Khulna context. In this regard, the exploration of politics, materiality and other dimensions of these 17 homes may not have captured a broader view of what constitutes the more-than-human home in diverse non-Western contexts. Further research with a more-than-human focus is needed to explore a variety of other homes so that the knowledge of the more-than-human home attained by this thesis can be situated in a wider, comparative context.

Secondly, the study homes are specific to the present geographic setting of the urban fringes in Khulna city. Data was generated in relation to the agencies that are situated and present only in these home ecologies and their immediate surroundings. The thesis, apart from some discussions during verbal interviews, obtained little evidence on the migrants' material connections with their origins. However, a handful

[10] Exceptions include Shillington (2008) and Hovorka (2012).

of interviews revealed that some case study homes occasionally received materials and resources (e.g. food crops, fruits and honey) from extended family relations in their original home area. More 'data' on these flows could reveal interesting aspects of multi-scalar more-than-human homes at a regional level. Understanding of these relatively *distant* non-human agencies supporting the migrant home may also require more innovative and mobile methods, in terms of tracking these regional flows. Some participants also revealed that they may wish to return to their origins in the future. This kind of *circular* migration behaviour, although not yet visible in the context, demands further exploration of the temporal and multi-scalar dynamics of the migrant's more-than-human home.

Another geographic specificity, which calls for further investigation, is the interior of the material shelter. Participants did not photograph the interior of their physical shelters. Consequently, the understanding of these homes may be somewhat partial. This contrasts with an earlier study (Parvin et al., 2016) on dwellers' appropriation of domestic space in a typical slum within metropolitan areas of Khulna city. In the slum context, dwellers associated their homes more with the interior of the physical shelter and less with the spaces outside. Perhaps rural migrants who choose to live in the fringes and avoid slums associate the belongingness to home more with a connection to the land and less with the patron-given physical shelter, however without further research it is difficult to draw any conclusion. There are other interesting dimensions (e.g. the sense of shyness, lack of pride, privacy or insecurity) that may have kept these migrants on the outskirts. Nevertheless, the contrasts demand further exploration of the materiality of the interiors of migrant homes: for example, how migrant bodies find comfort in these interiors when lacking resources (e.g. energy and

water supply) may be an interesting line of inquiry to provide a more complete picture of these more-than-human homes.

The project has also been somewhat partial with regard to the demographic characteristics of participants and the technology of the cameras used. Although male householders were present during post-photography interviews and group discussions, with a handful of variations, mostly female household heads participated in photo-response due to the extended commitment required to complete the experiment. Although most male members are detached from these home-ecologies during daytime to pursue jobs in the city, further exploration that is designed and focused on engaging male members is required to learn how male migrants experience these homes in more-than-human ways.

In addition, the study may have captured a demographically partial account of the more-than-human home as the participating household heads of the 17 families were in an age range of roughly 20-70. This has sidelined the accounts of children and aged migrants who may experience the more-than-human home differently. In particular, as a more-than-human conceptualisation of the home fundamentally positions the home as the site of performance, persons with disabilities may have a different experience of the more-than-human home. Older household members with disabilities in these migrant homes may have limited interactions with non-humans and they may find these homes rather alienating. More research is needed to understand the childhood and geriatric geographies of these more-than-human homes.

The technology of the disposable camera itself rendered the research somewhat partial. The cameras were not ideal for taking photos in low light or at night, which may

have restricted the generation of data on some of the nocturnal aspects of the more-than-human home. Although participants produced a handful of blurry and dark photographs, these were not discussed as participants were free to choose particular photos for discussion. Therefore, some of these photographs do not adequately reflect how non-humans operate in these homes at night. For example, in chapter 4, Seven, the household head, talked about how keeping the cowshed close to her sleeping space increased the overall security of the house. Future experimentations in the participatory photography approach need to take account of this limitation and should have alternate plans to explore how these more-than-human homes operate at night.

In wrapping up the thesis, I also touch on several points of departure. The more-than-human home and its multiple transactions within the city inspires more analysis of the non-human-centred feminist and urban political ecology of these homes, in terms of the discourse and political economy of land, planning, and urban expansion of cities. These ideas need to be expounded on more in future research. In particular, the idea of non-human relations as helping women to liberate and negotiate space needs to be teased apart more. It is apparent in this thesis that the more-than-human relations involved in being at and making home are still deeply embedded in human social structures and relations. Therefore, taking a more-than-human stance should not disregard the gendered categories that structure everyday lives (and that do so differently in different places). In a 2006 interview Haraway comments,

> I have trouble with the way people go for a utopian post-gender world – 'Ah, that means it doesn't matter whether you're a man or a woman anymore.'… We're in a post-gender world in some ways, and in others we're in a ferociously gender-in-place world. (Gane, 2006: 137)

From the recognition of gender as a powerful (primary) category, we need to use the more-than-human stance to do "new category work" – as Haraway suggests. Thus, a critical question to ask is how can we take on a more-than-human stance to transgress the boundaries of social categories like gender and create new (fluid) categories that then create new possibilities and new (just) ways of being.

Future research should focus more on how the affective and intimate more-than-human domestic relations can be brought in understanding the politics and planning for cities as the home can be an important point of reference to recognise urban dynamics, just as the city can be made known through the home. The emerging care relations in the home, and the recognition of the more-than-human home as sites for practising, sharing and community based economic practices, highlight rethinking home-grown 'development' alternatives to provide sustainable and inclusive lifestyles for even the most vulnerable communities that seek refuge in cities. Recalling Low and Iveson's (2016) articulation of 'care and repair', I see future avenues of research that can potentially illuminate caring as an approach to planning the informal cities – relationships of care emerge in many intimate places such as home; caring for others and participating in the repair of the environment that sustains home constitutes an important dimension of inclusive planning for more-than-human cities.

The thesis also provokes future research that can expand the existing theories of urban informality which can be further re-examined by paying attention to the non-human agencies that are at play within many informal settlements in the global south akin to the Khulna context. As is evident, the farmer-turned-landless migrants taking refuge in Khulna's informal settlements' after being displaced from rural areas due to various climate stressors have unique pitfalls or in/securities as cities are not imagined

to accommodate particular kind of 'natures', such as farmlands. However, taking alternate more-than-human vantage points it is apparent that the migrants are able to portray different agencies and relations that secure their access to urban land without formal rights-based access. Future research can build on the argument that urban land which is typically perceived to produce insecurity among disadvantaged, homeless and displaced farming communities demonstrates nonhuman agencies that empower vulnerable migrants by producing certain kind of informality beyond the overtly discussed 'urban slum' discourse in the global south. By de-objectifying urban land from abstract profit, investment, property, ownership law and diverting our attention to alternate 'concerns' (see Latour, 2004 for matters of concern)[11] and care can provide material as well as emotive gestures to rethink urban informality beyond the economic rationalities. Future research can also focus on how do more-than-human relations in these informal settlements are shaped by the climate change realities of the global south in producing particular kind of regional level rural-urban assemblages.

With all these exciting research potentials ahead at the intersections of the margins, more-than-humans, homes and the city, I wrap up the thesis by highlighting that the more-than-human home is a useful vantage point from which to investigate many socio-ecological dynamics shaping homes and marginal lives in cities Through

[11] Matters (or objects) are often taken for granted. Their possessions are defined by exchange value, property rights and ownership laws. The interests that surround matters/objects are, according to Latour (2004), isolated matters of facts. In contrast, matters of concerns call for a shift towards 'actual occasions' or occurrences. According to Puig de Bellacasa (2011), objects need to be re-baptised. Mol (1999) suggests, it is a call for going beyond the 'normative "matter"' so that matters appear more 'ontological.' We need to make an effort to de-objectify the matters of facts as we know them so that there are opportunities created to make visible a number of concerns that have participated in the gathering (and production) of the object, such as urban land, in my thesis.

its five key chapters, the thesis has enhanced understanding of more-than-human research, more-than-human home and homemaking, and their potential implications in planning for cities. The findings regarding these more-than-human homes as multi-scalar and hybrid spaces with alternate narratives of politics, gender, bodies, work and care relations offer much potential for further exploration of how thinking through the more-than-human home can explain broader urban, environmental, political and developmental narratives. However, this is only possible if we show enough sensitivity and patience by decentring our expert-selves.

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Appendices

Appendix I: Ethics Approval Letter

MACQUARIE UNIVERSITY
FACULTY OF SCIENCE

Dear Associate Professor McGregor

RE: Ethics project entitled: "Thinking through informality: More-than-human production of space in urban fringes of Khulna, Bangladesh."

Ref number: 5201400923

The Faculty of Science Human Research Ethics Sub-Committee has reviewed your application and granted final approval, effective 18th November 2014. You may now commence your research.

This research meets the requirements of the National Statement on Ethical Conduct in Human Research (2007). The National Statement is available at the following web site:

http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/e72.pdf.

The following personnel are authorised to conduct this research:

Associate Professor Andrew McGregor
Dr Donna Houston
Mr Alam Alam

NB. STUDENTS: IT IS YOUR RESPONSIBILITY TO KEEP A COPY OF THIS APPROVAL EMAIL TO SUBMIT WITH YOUR THESIS.

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).

2. Approval will be for a period of five (5) years subject to the provision of annual reports.

Progress Report 1 Due: 18th November 2015
Progress Report 2 Due: 18th November 2016
Progress Report 3 Due: 18th November 2017
Progress Report 4 Due: 18th November 2018
Final Report Due: 18th November 2019

NB. If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

4. All amendments to the project must be reviewed and approved by the Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

5. Please notify the Committee immediately in the event of any adverse effects on participants or of any unforeseen events that affect the continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at the following websites:
http://www.mq.edu.au/policy/

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/policy

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide the Macquarie University's Research Grants Management Assistant with a copy of this email as soon as possible. Internal and External funding agencies will not be informed that you have final approval for your project and funds will not be released until the Research Grants Management Assistant has received a copy of this email.

If you need to provide a hard copy letter of Final Approval to an external organisation as evidence that you have Final Approval, please do not hesitate to contact the Ethics Secretariat at the address below.

Please retain a copy of this email as this is your official notification of final ethics approval.

Yours sincerely,
Richie Howitt, Chair
Faculty of Science and Engineering Human Research Ethics Sub-Committee
Macquarie University
NSW 2109

Appendix II: Photos of seventeen homes

Photos: Author

Note: Householders' names and locations are hidden to retain anonymity. Photo-response did not reveal any images of the builtform. The images presented above are to present a sense of the hosuehold settings.

Photos: Author

Note: Householders' names and locations are hidden to retain anonymity. Photo-response did not reveal any images of the builtform. The images presented above are to present a sense of the hosuehold settings.

Appendix III: Instructions given during photo-response

Along with the standard ethics requirement, I read the following statement to participant families-

> I intend to see your home through your eyes, whatever you think is important and related to your home, such as, any object, person and/or activity, and you can capture them. You are being given two disposable cameras. We can supply more at your need. Please do not worry about the camera. It is very cheap. If it is lost, stolen, broken, under any circumstances, you will not be held responsible. Please take time as long as you need to convince yourself that you successfully presented your home.

Appendix IV: Instructions given during walking interviews

Along with the standard ethics requirement, I read the following statement to participant householder-

> I am keen to know more about how you maintain your home by travelling outside. Would you please allow me to walk with you? You can show me the places you travel and people you meet and the activities you do. Let's take it this way; I want to be your shadow for the day. Whenever you feel uncomfortable, I can quit. If in case you don't want to introduce me any of the workplace homes, I can stay outside on the street.

Appendix V: Group discussion photos

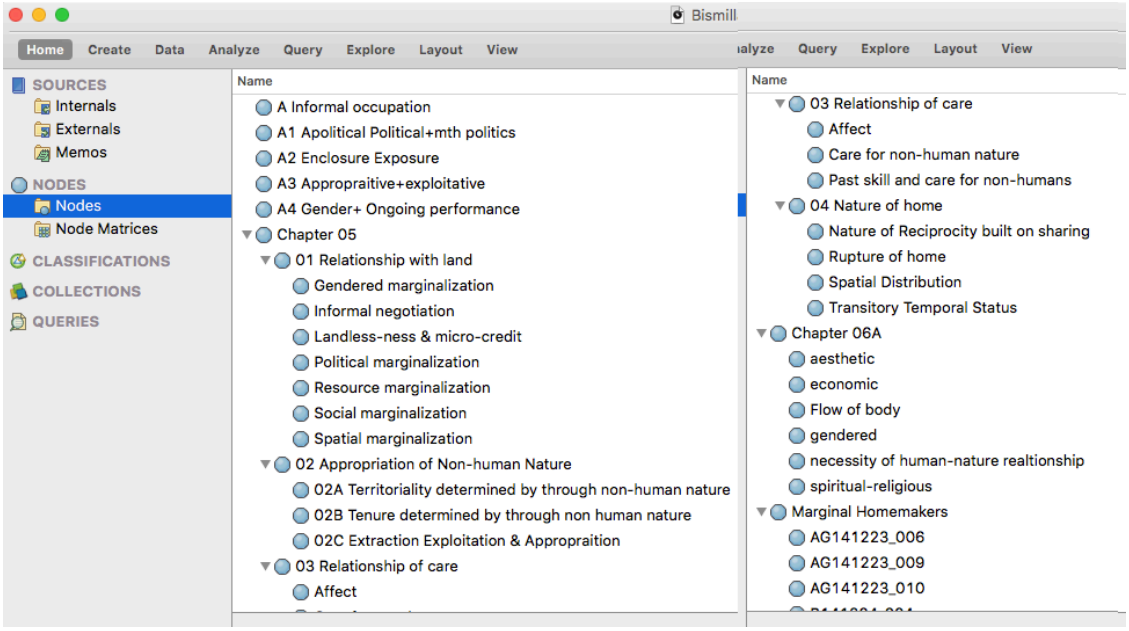
Group discussions involving female household heads only (1,2), male and female household heads combined (3), beneficiary household heads and NGO field officers (4, 5, 6). Source: Author

Appendix VI: Ownership signage of absent owners

Ownership signage of absentee landowners

Source: Author's photographs

Appendix VII: Rough themes through Open Coding on Nvivo



Source: Author's computer screenshot