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Re-Translating Nature in Post-Apartheid Cape Town: *The Material Semiotics of People and Plants at Bottom Road*

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Re-Translating Nature in Post-Apartheid Cape Town: *The Material Semiotics of People and Plants at Bottom Road*

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Abstract

This paper uses actor-network theory (ANT) to study a grassroots' ecological rehabilitation project in a marginalized area of Cape Town. By tracing the stabilization of relations between residents, authorities, plants and green areas, the paper demonstrates how ANT can be enfolded into the study of African cities as an attentive way to rethink agency, empowerment and collective action. It also shows how ANT allows for the study of epistemological and ontological politics inherent to all collective action—here demonstrating how plants participated in giving voice to memories of oppression while undermining expert-based practices that separate Nature and Culture.

The point is not to purify the repertoire [of Actor-Network Theory (ANT)], but to enrich it. To add layers and possibilities. In this tradition, then, terms are not stripped clean until clarity is maximised. Rather than consistency, sensitivity is appreciated as a strength. […] ANT does not define the term "actor". Instead it plays with it.
Annmarie Mol (2010: 253)

1. *ENFOLDING* ACTOR-NETWORK THEORY INTO AFRICAN URBANISM

The emergent literature on African urbanism has challenged development studies for its overly rural focus in understanding a rapidly urbanizing continent, but also argued that to understand cities bearing the marks of institutionalized racism through colonialism and apartheid, and high levels of informality, a new type of theory-making is needed, avowedly with relevance beyond Africa (Lawhon, Duminy, & Ernstson, in review; Myers, 2011; Parnell & Robinson, forthcoming; Pieterse, 2008; Robinson, 2011; Simone, 2004). African cities are often viewed through conceptual apparatuses, statistical tools and indices based on Euro-American experience—portrayed as general urban theory and valid everywhere—through which African cities come out as 'failed', 'unsustainable', 'doomed' or as simply "not working" (Simone, 2004). New theory-making is needed that can empirically recognize how Africans make their cities, how novel postcolonial forms of urbanization take shape and negotiate Euro-American notions of development, but also how experiences from African cities can be made to travel as theoretical notions, or 'conceptual vectors' (Roy, 2009), to inspire analysis, political practice and urban theory-production elsewhere.

This paper strives to enfold actor-network theory (ANT) within African urbanism as a repertoire to empirically record and analyse civic collective action. Rather than

placing the ability of producing change in 'structural factors', or in 'individuals', ANT articulates a relational viewpoint of agency, which seems more attentive for seeing the African city anew (Myers, 2011) and to allow the search for how "platforms of engagement" for emancipatory change in African cities can be built (Simone, 2011).[i] Focus is thus to perform ANT in a way that can allow an empirical engagement and a rethinking of agency, collective action and empowerment. To do this, the paper engages a case study of a grassroots' driven ecological rehabilitation project in Cape Town, South Africa. As such the paper also sensitizes to how a purportedly apolitical field like 'biodiversity protection', which has received less attention in African urbanism literature, is filled with political content, thus supporting a broader academic move to use urban political ecology as an entry point to critically examine and understand material, epistemological and ontological politics around 'sustainable development' in and through African cities (Gandy, 2006; Loftus, 2006; Myers, 2005).

In the following, the paper introduces ANT theoretically to show how ANT can be used to trace and analyse collective action. A short section follows on Cape Town, succeeded by a detailed account of collective action. A methods section is included in Appendix A.

2. RECORDING AND ANALYZING COLLECTIVE ACTION

Departing from a Foucauldian notion of power, 'empowerment' is in this paper thought about as 'the ability to act and change the order of things'. This includes changes in material *and* symbolic order; or in other words, when collective action changes the distribution of material resources *and* the way reality is conceived, including shifting or shuffling who can claim to be in the know (cf. Swyngedouw, 2009).[ii] Following this notion of empowerment, the following paragraphs show theoretically how ANT provides an ethnographic repertoire to observe, record and report concrete action, but also to analyse epistemological and ontological dimensions of collective action.

In recording action, ANT might be most notorious for allowing non-humans like plants, animals, and machines to be actors, or actants, *on par* with humans in producing action. For instance, Callon (1986) allowed sea currents and scallops, alongside scientists and fishers to participate in building collective action, and Law (2003) described how the Portuguese held together their vast 16th century empire through boat and navigation devices. However, ANT's notion of actor is profoundly relational (Harman, 2009). ANT holds that an actor is its relations, and consequently that action can only be materially produced through stabilizing networks of relations that can carry, or translate, action across space to make effects—the ability to 'act at a distance' is performed through aligning, or negotiating a string of mediators that all need to actively participate to carry action (Latour, 2005; Law, 2009; Murdoch, 2006). Rather than placing agency *within* individuals, or *within* human groups, ANT thus plays with the idea that the ability to act and change the order of things, lies in stabilizing heterogeneous collectives of humans and things—a distributed agency (see e.g. Latour, 1994, 1996, 2010; Murdoch, 2006: 68).[iii] The collective—or the heterogeneous actor—carries *its* agency distributed across many relations. Collective action is however more than the movement or translation of physical and material action, but also about constructing knowledge and shifting cultural codes of meaning (Melucci, 1996). In relation, Law has suggested that actor-networks "can be seen as 'scaled-down' versions" of Foucault's discourse or episteme, as the tracing of "particular translations […] rather than a diagnosis of an epochal epistemic syntax" (Law, 2009: 145). Importantly for this paper, Law (2009) therefore prefers to speak about actor-networks as a "material semiotics", to emphasize that things and people, in stabilizing relations to one another, come to code a way of knowing and being through their relation to one another (see also Mol, 2010)). He emphasizes that these stabilizations are not rigid, but happen in fluidity; what is traced are provisionally stable arrangements, in continuous need of re-enactment to remain.

Thus, 'actor' and 'translation' receive quite specialized meanings in ANT. Actors gain in strength only through stabilizing relations to other actors. This is done through trials over how to connect to one another and these trials are traceable by the empirical researcher.[iv] Translation is then, writes Latour (2005), "a relation that does

not transport causality but induces two mediators [or actors] into coexisting. If some causality appears to be transported in predictable and routine way, then it's the proof that other mediators have been put in place to render such a displacement smooth and predictable." Thus, as relations are stabilized, actors come into being as capable of doing things to the world through a distributed agency. Together, this brings a repertoire to empirically trace and analyse agency and empowerment through collective action. The paper now moves to Cape Town and the case study.

3. MOVING THROUGH CAPE TOWN: INEQUITY AND NATURE

Cape Town with all its contradictions of 'not really being Africa', while at the same time hosting vast informal settlements, and a large non-white working and middle class, presents a pivotal case to analyse how urban ecology and empowerment can be interlinked through unequal and post-colonial geographies. Given its rapid geographical expansion, and its location within an area of great biological diversity, Cape Town has struggled to meet the double agendas of social development and biodiversity protection. With increasing urban poverty and segregation on one hand, there has also been the pressure to sustain an indigenous and world-acclaimed *fynbos* vegetation growing within the city limits (pronounced 'feinbush', from Afrikaans, literally 'fine bush').[v] This intersection of poverty, segregation due to colonial and apartheid legacies, and high records of biodiversity have sparked several attempts to re-think biodiversity protection.[vi] However, the main approach is still to use what can be referred to as an expert-based Cartesian practice of controlling space, embodied in the form of expert-managed nature reserves and biodiversity mapping techniques that calculates the "value" of green areas by counting the number of species they contain.[vii] Green spaces that fall outside nature reserves, or that rank low on its potentiality to sustain biological diversity fall off the map of this practice, receiving less funding and attention. This Cartesian practice, informed and made legitimate through a global discourse of biodiversity protection, covered in 2010 some 261 sites and 32 000 hectares (Laros, 2007).

Figure 1. *Bottom Road in Grassy Park lies in the southeastern part of Cape Town and at the northern shore of the wetland Zeekoevlei, some 45 minutes by car from the historical city centre. During apartheid Grassy Park was classified as a 'Coloured' area forming part of Cape Flats, a low-lying historical wetland area. This panorama image overlooking Cape Flats was made of several photos taken from a hiking path on Table Mountain close to Silvermine by the author.*

Based on extensive participatory observations and interviews during three years (2008-2010; Appendix A), the argument here is that ANT can help to write an account that sensitizes to how a small grassroots' initiative in the lower-middle class township of Grassy Park challenged and "disturbed" this Cartesian discourse (Figure 1). This involved a set of trials to stabilize relations to residents and plants, but also to authorities so as to make state resources travel through the unequal geography of Cape Town. Importantly, I will argue that what was also in-the-making was the composition of a new way of knowing and being in relation to urban green spaces and ecology that has relevance beyond the case study area, and for theory-making around empowerment more broadly. Indeed, against an overly technomanagerial and Cartesian practice, whereby Nature can be 'managed' as a detached 'object', this alternative way of engaging and making known urban ecology, muddles the binaries of Nature and Culture and embeds plants, animals and concerns for sustainability through memories of apartheid and oppression. Thus, rather than evacuating the political content of the case study by portraying it through mainstream development and managerial discourse on 'collaborative environmental management' (Reed, 2008), I choose a mode of analysis that can articulate the

political content of collective action, especially tracing how new ways of knowing and being are constructed through engaging plants and ecological relations.

4. PERFORMING ANT: TRACING A "BLUEPRINT" THAT CAN TRAVEL

In walking into 10 Bottom Road in Grassy Park, Cape Town, you also walk into a magic box, a show house of the possibility and promise of civic-led ecological restoration; a house made to support the narration of a metamorphosis from rubbish dump to a haven for *fynbos* vegetation and human community relations (Figure 2). 10 Bottom Road is the residence of Mikey and his family, a baker with his own bakery in Grassy Park and one of my key informants. During the course of merely four years, some 50 000 plants have been planted at Bottom Road, attracting pollinators, dragonflies, birds, and toads. As well as people. For instance, there has been a continuous adding of walk-ways and benches, but also barbeque places for the year-around *braai* parties, and simple wooden roof structures, so called *boomas* that filter the summer sunlight, creating shade for humans (and non-humans) to enjoy (Figure 3). Many by now, from close-by living residents, to nature conservation managers, and even the Mayor of Cape Town and the Premiere of the Western Cape Province, the Democratic Alliance leader Helen Zille, have walked into 10 Bottom Road to become part, for some fleeting moments, or for longer—if the mobilizing effect of Bottom Road is successful—of the growing actor-network that has come to suggest an alternative for how urban ecology can be enacted in Cape Town. This section aims to describe the stabilization of a heterogeneous collective that made "Bottom Road Sanctuary" emerge as an actor, a "blueprint" to point to what could happen at other marginal spaces of Cape Town.

Figure 2. *Through stabilizing relations between several actors, Bottom Road has been transformed from a "rubbish dump" to a "blueprint" for civic-led ecological rehabilitation. As an artefact it has attracted others, and has been used as a material reference to what could happen at other derelict open spaces of Cape Flats, the area assigned to non-Whites during apartheid. Those actors that have been attracted include researchers and politicians, children, pollinators, and the state organization Working for Wetlands. Photos taken during participatory observations by the author.*

(a) No group, only group formation

An actor is its relations. Or, as Latour (Latour, 2005) put it in *Reassembling the Social*, there is "no group, only group formation." In the very early phase, even before a project existed, there were processes of group formation that are key to describe. One is around the residents at Bottom Road out of which Mikey (and his house) emerged as spokesperson, gaining the ability to speak on behalf of a collective (Callon, 1986). The other is around the conservation managers at Rondevlei Nature Reserve. As these two groups come together through the physical space of Bottom Road, vastly greater forces could be attracted through enrolling *fynbos* plants, as we will see. It is important to describe the full labour of all participating actors in stabilizing these groups, and to do away with 'micro' and 'macro' actors. Rather, in giving all actors equal ability to change the course of events, the world is kept flat (Latour, 2005); action happens in and through the stabilization of relations.

In 2005 the City of Cape Town had re-zoned the Northern shore of Zeekoevlei, a seasonal lake and wetland in the Southern parts of Cape Flats, from public open space to residential land (Figure 1). The land was sold in smaller parcels to residents that had grown up in Grassy Park, or close-by, in what had been classified as a "Coloured" area by the apartheid government's Group Areas Acts of the 1950s. The plots were basically a "rubbish dump", as quoted from Mikey, and overgrown with "Port Jackson [trees] and other non-indigenous vegetation", as expressed by a conservation manager. It was also an accidental meeting on the shore of the lake with Derrick, the chief conservation manager from the near-by Rondevlei Nature Reserve (responsible also for the Zeekoevlei Nature Reserve), which initiated Mikey to talk to Derrick about planting *fynbos*, to connect the housing parcels into a community garden, and start a rehabilitation project. However, to understand how such a brief encounter could lead to anything more durable, the two group formations need to be accounted for.[viii]

The residents' group formation took place during the building of houses. As various interviews testify, when residents built their houses they also started to exchange stories about Cape Town's violent mid 1980's, when they were all in their twenties.[ix] As vividly recounted by Marvin, a math teacher and Mikey's next-door neighbour, the residents soon recognized they were from the same generation and had participated in the struggle against apartheid. Marvin for one was a student activist in an organization aligned with the United Democratic Front, "always planning for the next thing to do, to demonstrate, do roadblocks [and] together with other coloureds, face the police and the military on the streets". He lost two friends, one shot on a street not far from Bottom Road. Although the exact origin of the idea to ecologically rehabilitate the lakeshore is difficult to find, the exchange of struggle stories soon started to intermingle with stories about living with the *vleis* of Cape Flats, the many lakes and wetlands on the low-lying areas of Cape Town to which the Apartheid state evicted people. Marvin for one, grew up close to Zeekoevlei and was told by his elders not to cross the road and play at the lakeshore, since that area was for Whites only, which is now where Bottom Road lies. However, just as any kid not

obeying his parents, he went to play with his friends, remembering the beauty of the Vlei: "We could see fish there. The water was crystal clear." Mikey had also grown up close to a *vlei*, the Princess Vlei, lying further to the west and as a young Capetonian he recalls how apartheid regulations meant to be spatially restricted. With few ocean beaches open to Coloureds, he often hung out with his friends at the *vleis*. When moving to Zeekoevlei there was a chance to re-enact, he meant, this "emotional bond" to the *vlei*. But, just as with Princess Vlei, Zeekoevlei was now in a sad state of degradation.

In the sharing of stories, in being in-place working on their houses, there was a first trial of group formation, a first delicate construction of commonalities that had yet to find a more tangible form. In parallel, Mikey was struck by how residents on the other side of Zeekoevlei, classified as White during apartheid, had treated their lake property—they had built high security walls leading all the way down to the shore.[x] Although he knew next to nothing about planting, nor about *fynbos*, he recalls telling the other residents that "we need to be different, in terms of how we live around the *vlei*". He suggested they could connect their properties, avoiding building security walls in between them, and form a communal garden, where people could walk and meet, "building a community spirit".[xi] Some neighbours were however hesitant, as most South Africans owning houses would be, worried about criminals entering their property, especially as "gang land", as narrated by residents, lay just across the nearby Lotus River.

The second group formation was around conservation managers. This formation was of course long in the making and quite different, established through government laws to protect certain species and 'nature reserves', while educating and paying scientists and managers to uphold the laws and intention of the state. This group formation was part of the Cartesian practice mentioned previously, designed to deploy its labour and capital for work *inside* designated nature reserves. Initially, the nature conservators at Rondevlei had also resisted the idea of re-zoning at Bottom Road, since this meant losing "conservation space" to residential use. However, they knew from a report that the soil type where Bottom Road residents were building

their houses, was ideal for sand plain *fynbos*, a vegetation type, according to a conservation manager, "which is almost extinct on the Cape Flats […] so the more that we can rehabilitate on those specific soil types, back to what it was, the more we are conserving". In the chance encounter on the lakeshore, Derrick could thus seriously contemplate that Mikey's idea of a community garden could be a worthwhile rehabilitation project, a project he could argue for within his organization as a worthwhile effort.[xii]

Importantly, standing there on the lakeshore the two spokespersons did not need to reveal their whole vision, or the whole complexity of their groups, but only construct one commonality—the mutual interest in getting *fynbos* planted in the soil on which they were standing. However, to materialize this mutual interest there had to be space enough for the rehabilitation project to work on. The City of Cape Town had only kept five metres next to the shoreline as public open space and the rest was sold to the residents. Mikey then organized a formal meeting in his house with the residents to which conservation managers were also invited. As a body under the City of Cape Town the Rondevlei conservation managers had the authority to create a by-law, a "white paper agreement" through which the City of Cape Town would provide the plants needed for the planting, if the residents gave five metres of their property and allowed public access. The contract also meant a promise not to build security walls in-between their properties, a way for Mikey and residents to code into physical print the idea of living differently and build a community spirit. First the six most positive residents agreed to sign, and at a later meeting, another five joined.

This piece of paper, and some ink, effectively created a 10 by 200 metre strip of shore land (five from the City, five from the residents) for the rehabilitation project to work on. However, the contract was more than just a silent intermediary. The contract was an actor in itself as it intervened and translated the loose talking about memories of apartheid and life at the *vleis* (for the residents), the state's regulations on biodiversity (for the conservation managers), and the chance meeting at the lakeshore, into a tangible collective. Like all contracts, it strived to diminish insecurity, but it also produced 'actors'. It created clear-cut borders of who was in or

out. The contract served to preserve the initial arousal of unity (especially among the residents) when they were dreaming about a mutual project, and as a quilting knot to tie the two groups together, the Residents and Conservators, designating their roles and responsibilities, while demarcating what physical area was in question. The actor-network now consisted of 0.2 hectares of land with a specific soil type, eleven residents, conservation managers, a contract, all enrolled to put *fynbos* plants in the soil.

(b) Enrolling plants, machines and labour

Through forming closer ties with the conservation managers, Mikey reached a better understanding of their internal organization. He quickly learnt many Latin names of the *fynbos* plants, impressing managers and biologists, but later also residents and those visiting Bottom Road, including me. He also started to invite visitors and conservation managers to his house, and increasingly stabilized himself (and his house) as spokesperson and a point of passage through which visitors and the enrolment of new actors was negotiated. Crucial however was to quickly get this newly born collaboration to do things on the ground, or else both residents and conservation managers might fall out of support. Mikey's reasoning was that one could not wait for scientists and other "high intelligence boys", as he put it, to make reports and plans to design a scientifically informed rehabilitation project, but he felt pushed to quickly deliver action on the ground, working with the idea that "it is better to show than tell". In interviews he described Vicky – one of the conservation staff – as a close ally as she was "not dogmatic in her thinking", sharing his eagerness to get down to action.

With Vicky's position at Rondevlei Nature Reserve, alongside Derrick's, another actor could be attracted: Working for Wetlands, a state programme to improve wetlands and provide jobs. Through aligning the rehabilitation project at Bottom Road within its "Peninsula Project", Vicky and Derrick could access low-paid workers needed for the heavy labour to remove non-indigenous plants, and to plant *fynbos*. Although residents continually contributed, the bulk of the labour came from Working for

Wetlands. In fact, during two years a group of eleven workers provided in total some 42 000 person-hours of work at the site, as estimated by the workers' supervisor.

(i) A necessary interlude

What started as an exchange of struggle stories while building houses on a former dump site with specific soil type, had now grown to include already highly stable actors like Rondevlei Nature Reserve and Working for Wetland. Through the stabilization of ties to such 'black boxes' (Harman, 2009: 36-47; Latour, 1987), the actor-network in-the-making could tap into their resources and make itself powerful as it became equipped with machines, with a labour force and with plants that started to pour into the site. Tons of soil was moved around by a bulldozer, non-indigenous plants were pulled out, piled up, transported away and dumped. The sand plain *fynbos* soil was unearthed and thousands of *fynbos* seedlings were brought from various nurseries in the city—from Kirstenbosch Botanical Garden and the Edith Stephens Wetland Park—and put to grow in the soil.

As can be seen, in attempting to account for the stabilizations of a 'small-scale' or 'local' project, we are almost immediately propelled out in space and time. All of a sudden the project is filled with actors that come with enormous 'forces' and 'flows of resources' that animate the actor-network. However, rather than treating the state as context, or as a 'structural factor' that 'underpin' change, we should remember that actors like Working for Wetlands and Rondevlei Nature Reserve are stabilized actor-networks, that for the purpose, and length of this account need to be left more or less intact, as 'black boxes'. A short description of the Working for Wetlands is however necessary as it shows how time and space are enfolded into present action, and why there are such massive 'structural resources' around rare plants in the Western Cape.

Working for Waters, and the closely related Working for Wetlands are public works programmes that came into being after apartheid as an amalgam between an unlikely alliance of biologists and the African National Congress' wish to create jobs.

Funded from 1977 to 1989 by the apartheid government, biologists had studied the *fynbos* ecology through the Fynbos Biome Project (Cowling, 1992). Over the years the project produced, as any scientific project, reports, publications and maps that came to stabilize a way of knowing the intricate details of *fynbos* ecology, and the loss of its extraordinary species-level biodiversity. This research continued, not the least with experts focusing on the loss of biodiversity due to Cape Town's growth (Holmes, Wood, & Dorse, 2008), even dubbing and popularizing Cape Town as "a biodiversity mega disaster" (Rebelo et al., 2007; Yeld, 2008) pitching an urgency to take action.

However, the biodiversity argument seems not to have been enough. Another scientific fact was needed, and this one linked to a more tangible resource for society—water. Through various "multiple catchment experiments" in the Jonkershoek valley close to Stellenbosch outside Cape Town, van Wyk (1987) for one reports how the monitoring of stream flows from 1940 to 1980 showed that increasing plantation of non-indigenous pine trees could greatly reduce stream flow (with 98 per cent cover of *Pinus radiata*, one site lowered stream flow from 663 to 350 millimetres per year of rainfall equivalent). Others reported similar sharp reductions from other sites in South Africa, and for other non-indigenous trees (van Wyk, 1987; see also more recent publications by Turpie, O'Connor, Mills, & Robertson, 2007; van Wilgen, Richardson, Le Maitre, Marais, & Magadlela, 2001). Through these various trials between plants and scientists, indigenous species came out as better equipped than European-introduced species to sustain precious freshwater flows, providing the possibility for sweeping institutional change. As the ecological economists Turpie and colleagues put it (Turpie, Marais, & Blignaut, 2008):

"A group of natural resource managers and scientists presented the idea of the programme to the then Minister of Water Affairs and Forestry, Prof. Kader Asmal, of the newly elected African National Congress (ANC) government, in 1995. They proposed addressing two immediate challenges with one intervention: clearing invasive alien plants could not only address the effect of invasive alien plants on the country's scarce water resources, but also had considerable potential for job creation and economic empowerment."

A parallel effect of this mobilization around *fynbos* and water, stabilized the category of "non-indigenous species", which increasingly was referred to as "exotics" and later turned into "aliens". The usage is pervasive and runs from experts to laymen, which can be noted in the quote above by University of Cape Town ecologists from 2008, and the usage has created a firm dichotomy of how nature is to be viewed in the Western Cape; either as "alien" (and bad) or indigenous (and good). The former would be tall trees—pines, oaks and eucalyptus—or water hyacinths and bushes like the Port Jackson, while the latter would include *fynbos* vegetation (which in turn can be divided into subcategories). Of importance here is that the 'black boxes' of Working for Water and Working for Wetlands—and all their resources—were brought together and rest upon this dichotomy.[xiii]

Moving back to Bottom Road, we have learnt that through a group of scientists, a set of experimental sites across South Africa, and the transition to democracy which placed a developmentalist ANC party in power, Working for Water had been created with an annual budget of 400 million South African Rands with the mission to create jobs, alleviate poverty, destroy alien plants, and plant indigenous species (Turpie et al., 2008). In 2001, Working for Wetlands was created as an offshoot (Turpie et al., 2008) and in my account it appears as a strange actor indeed, willingly 'feeding' low-paid workers to the labour intensive practice of removing 'alien' plants, and planting *fynbos* at certain sites of intervention in Cape Town. Nonetheless, the ability to lure and attract this actor to work at the specific site of Bottom Road needs to be accounted for. As urged to us by Latour, we still need to render visible the "hyphenated 'network' [… that] connects actors"—and "replace actors of whatever size by local *and* connected sites instead of ranking them into micro and macro" (Latour, 2005: 179).

The initial ability to connect Working for Wetlands to Bottom Road went through Vicky and Derrick at the Rondevlei Nature Reserve. However, keeping workers and machines flowing into Bottom Road, and later expanding the network to other sites,

and crucially, in order to make these resources participate in forging a new way of knowing and being in Cape Town's urban ecology, rested upon the relations that Mikey and residents stabilized with the workers. Importantly, as a baker Mikey worked very early mornings, and while being the owner, he had others selling the bread during the day. He thus came to oversee and participate almost daily in the coordination of machines and workers, re-shaping the shore land, not only for planting *fynbos* but also in designing walkways and barbeque places. He invited the Working for Wetlands workers with their families and kids to *braai* parties, and they formed relations with the residents, and the place itself. Their coordinator Mercy, who like the others was from nearby Lotus River township, told me: "We became a big family there at Bottom Road [and] we still go there for *braaing*."

(c) Negotiations with plants

So far we see how the *fynbos* plants play an increasingly important role in folding various actors into collective action. First of all, the plants had been related to huge state resources in the form of manpower and machines, mainly since they had been situated by scientists and the post-apartheid ANC government as carrying the properties of being "indigenous" and "water wise" (as opposed to "alien" and "high water consumers"). Further, through playing the double role of "correcting the imbalances of apartheid" while increasing the surface of biodiversity protection, the *fynbos* plants mediated relations between residents and conservation managers, thus allowing the transportation of state resources to the small space of Bottom Road with its particular soil type. However, the *fynbos* plants also carried their own physicality, their own way of responding to whatever environment they were put into. When put into the soil, they started to grow and more troublesome relations to plants and soils had to be negotiated in order for Bottom Road to emerge as a capable actor of community-based ecological rehabilitation. Other trials needed to be faced, which would shape the actor-in-the-making.

On one level, the idea of Darwinian competition was to work for the project. The soil was prepared for success by removing "alien" plants and seeds. By planting

thousands of *fynbos* seedlings, the idea was that *fynbos* would crowd out all 'bad' alien plants, consuming their nutrients. However, some "alien" seeds were left in the ground, where they collected nutrients and water and kept cropping back. They were then named "weeds" and targeted, as before, with more labour. Another quite unexpected trial arose from how different kinds of *fynbos* species reacted to being planted. Some *fynbos* species simply grew quicker than others, outcompeting them and taking over space. But especially Mikey, as in any botanical garden, wanted many different species on a small space. So the 'Darwinian' process of competition *between fynbos* species could not be tolerated, leading to certain *fynbos* species having to be constrained, ripping them up (as with the "weeds"), again using labour. Thus, while the simple dichotomy of *fynbos* and "aliens" had served well to organize the network so far, at another level it proved too simplistic. Additionally, although carrying massive resources, with the *fynbos*, the project grew increasingly dependent on labour and money, making it necessary for Mercy's team from Working for Wetlands to come back for two weeks per year for "weeding". Workers from the nearby Philippi Farm Area were also hired, paid by Mikey and the residents.[xiv]

The trial with weeds has continued and especially before important events and visits at Bottom Road, for instance the visits by the Mayor and the Premiere in 2010, the intensity of weeding has increased to make sure that Bottom Road Sanctuary comes out as the "blueprint" it is intended to be, i.e. to help visitors projecting what civic-led rehabilitation can accomplish at other derelict and marginalized spaces of Cape Flats, and as such mobilize more supporters and extend its allies.

(d) Expanding the actor: enrolling Last Road and the Ecogreen Park

The loose talk about living differently around the *vlei*, to build community, which by now had been scripted into the "white paper agreement" and in the layout of their houses and gardens, was also about apartheid memories. On this once White classified lakeshore, residents argued, and Mikey forcefully so, they could not stop at

their own backyards, but the "blueprint" had to be capable of moving to other locations.

Two years into the Bottom Road Sanctuary project, Mikey contacted five other residents along the near-by Last Road. The pattern repeated itself with an initial meeting, with Rondevlei conservation managers extending the 'white paper agreement' to include these new residents who willingly added their five metres to the project to work on, while agreeing to not put up a security wall on their properties. The emergent actor-network of Bottom Road was starting to do its trick, demonstrating to others that is was capable of turning rubbish dumps into beautiful *fynbos* gardens, and improving ecological function by attracting birds and pollinators.[xv] Through the signing of yet another white paper agreement, machines and labour also poured into the Last Road section and reshaped it—large stands of reed were removed and small ponds were created for wetland *fynbos*. Some 6000 plain sand *fynbos* plants were planted on another 0.4 hectares. This spatial extension demonstrated not only the will to expand, but also to attract more attention. Choosing to enrol Last Road residents meant extending the project to a strip of land that was more visible from the bridge across Lotus River at Fisherman's Walk, a well-travelled road that exposed the project to more people.

Figure 3. *The above two images shows from left to right the Ecogreen Park in an early and later phase of planting fynbos. Below shows from left to right images of a braai place for*

barbeque, an employed worker uprooting 'weeds', and the walkway along Last Road. Photos by the author.

Soon after machines started to work at Last Road, Mikey contacted the Department of City Parks at the City of Cape Town to ask about a barren piece of land lying between Bottom Road and Last Road. Another agreement, this time non-written, made City Parks employ contractors and direct Working for Wetlands to this piece of land, soon to be called the Ecogreen Park. Another 3 000 plain sand *fynbos* plants were added, and 40 camper trees along the perimeter of the square, and on nearby residents' road verges. A shading *booma* was built, plus a *braai* place for the popular barbeques. A year afterwards, the square with grass field in the centre had become a popular venue for *braai* parties, birthday celebrations and soccer-playing kids. The loose talking of gathering the community through planting *fynbos* was bearing fruit; the Bottom Road Sanctuary was proving itself an actor-network capable of merging community and ecological rehabilitation, and spreading to other spaces. The reputation of both Mikey and Bottom Road was travelling. The same year, the "Bottom Road Sanctuary" was officially recognized and marked with its name on the City of Cape Town's map of the False Bay Ecology Park, together with Zeekoevlei and Rondevlei nature reserves.

(e) Expanding again towards a "Dressing of the Princess"

It had taken almost three years to reach this mature stage of the actor-network, and what happened next seems to have been based on this maturity. The project shifted attention towards the much bigger wetland and public open space area known as Princess Vlei, lying on the other side of the M5 motorway of Grassy Park. In 2008, a three-year memorandum of agreement to rehabilitate Princess Vlei was signed between Mikey's newly created organization (BioWatch, soon to be renamed the Cape Flats Wetland Forum), and tiers of the state. The project was baptized "The Dressing of the Princess" that resonated with the legend of a Khoi Princess whose tears had flowed down the mountain as she, according to popular legend, was killed and raped by European sailors 500 years ago.[xvi] The project soon became the prime

vehicle to resist the plans to build a shopping centre at the wetland, and traditionally white-based environmental groups came to openly support the rehabilitation project, alongside schools, residents, and citizens across Cape Town. Indeed, protest lists in 2009 gathered 2200 signatures and an objection letter day in 2010 gathered letters from up to 24 different postal addresses, most from areas previously classified as Coloured, but also from previously White classified areas from further away. The actor-network that had been stabilized through translating Bottom Road into a 'blueprint' for civic-led ecological rehabilitation, now started to perform at a wider scale. In leaving the account here, it is important to mention that during the following years, especially during 2012, Princess Vlei and the struggle to stop the shopping centre has become one of the most medialized urban environmental struggles in South Africa, with coverage in city-wide and national newspapers (Ernstson and Sörlin, 2012).

5. DISCUSSION

This paper has aimed to enfold ANT or 'material semiotics' as an ethnographic repertoire in African urbanism. The aim was also to use this account to rethink notions of agency, empowerment and collective action. So far the paper has hopefully made intelligible the idea of a 'distributed agency', that collective action needs to be constructed through the stabilization of heterogeneous relations. This notion of a distributed agency will in this discussion section be used to make some more general claims, or rather, to sketch a 'model' of empowerment that can be translated into analysis in other cities and contexts. To do this, I will use the empirical account to analyse the epistemological and ontological politics that are in-the-making through the same actor-network, and also show how this can be used to critique mainstream discourse in development studies.

(a) Material semiotics and ontological politics

The account demonstrated how the repertoire of ANT helps to appreciate the many relations necessary to move material resources through an unequal geography, and

how these relations are stabilized through trials and continuously remade to stay durable. We were taken from a chance encounter at a wetland, to a full-blown project that moved material resources for *fynbos* rehabilitation outside the Cartesian map of biological experts. In spite of the strong will of certain humans, collective action had to be constructed through plants and 'weeds', which carried their own physicality influencing collective action. The *fynbos* plant in particular played a central role, linking residents to managers, researchers to the African National Congress, and state resources including machines and workers to the small space of Bottom Road. In thinking about empowerment, this shows that it is not only dedicated residents or citizens that are needed in moving resources to marginalized areas (changing the material order), or well-meaning experts, but also non-humans like plants and soils.

However, to stop the analysis at this point would leave us short in understanding the inherently political character of collective action, development, and urban nature. As argued in the Introduction, there is more to actor-networks than material action, there is also a material semiotics. In fact, as relations between things and people become stabilized, they also come to code a way of knowing and being through their relations to one another (Law, 2009). What does this notion mean in relation to the empirical account here, and for empowerment more generally? Lacking the space for a full-fledged analysis, an outline of this analysis will be done.

Although we left the account as it was shifting scales to Princess Vlei and onto a more apparent political scene, the epistemological claims and the ontological politics were already present in relations stabilized in and through Bottom Road. In an early interview at his large table at 10 Bottom Road overlooking the *fynbos* and the lake, Mikey departs into a longer narrative with his eyes set on his six year old son playing outside in the garden:

> He's a fynbos king… He's going to be the environmentalist I always wanted to be. [...] He'll be bright, but he also has to be hands-on. It's got to be that balance, you know. I mean like you guys [referring to me as academic]… doing your work. And you got

these high intelligence boys up in the office. But in getting it down to the ground they are not doing anything. It's not happening. They are sitting in forums, and they are sitting in meetings, but the message hasn't been brought across, or hasn't been spread in terms of work, you know what I am saying. And whether they promote it, like I said to you, in TV or in the newspapers, its not going to do much. Its gotta be *hands-on*, peoples gotta *see* it. You gotta be a part of it... You see, when you say *fynbos* to people, lets take the coloured people. Say *fynbos* to them, and they tell you, 'what is that'. 'No, that must only grow in the mountain, or it only grows in Kirstenbosch [Botanical Garden].' That's the belief system. Now, one must understand this, that [the reason] they believe that, [is] because that is what is projected. [...] They don't realize that there is eight thousand *fynbos*, or eight and half thousand species; there is mountainous species, and the plain sand *fynbos*, they don't understand that. So they only believe it's from the mountain, or it's in Kirstenbosch: 'That's where it's gotta be. If you want to see *fynbos* you go there.' They don't realize that *fynbos* can be put into their backyards.

The quote above clarifies the epistemological challenge that the Bottom Road actor-network is posing to the dominating way of protecting biodiversity in Cape Town. This dominating view has of course its own actor-network, embodied by biologists working for the City of Cape Town and the South African National Biodiversity Institute, that through scientific calculations have produced a map for choosing sites of conservation priority, named the Cape Town Biodiversity Network (Davis, 2005; Oelofse, 2005). On this map, Bottom Road did not even figure, and Princess Vlei was given the categories B and C in "wetland ecological importance" (Oelofse, 2005). In response to this Cartesian and detached selection of sites to prioritize—made in an office using a computer program and a computer screen—the Bottom Road actor-network insists that biodiversity conservation needs to be *hands-on*, and needs to *involve* people; it needs to weave linkages *between* communities and plants, and continuously means that you move with your own body through the spaces where *people* exist, not necessarily plants, and use this information as a way to select the next site. Instead of trying to learn-before-action; action comes first in order to learn—feel, try and stabilize those relations that perforate the old Nature/Society

dichotomy. Plants do not come first—but 'human-with-plant' is the only way; a hybrid logic. An almost reversed logic.

But even more is in the making. To refer to Kirstenbosch is to point out that there is geography of difference in Cape Town due to its apartheid past. A past when persons were divided and forcefully moved to certain confined spaces because of how the state classified the colour of their skin. Kirstenbosch Botanical Garden figures frequently in conversations at Bottom Road and Princess Vlei. This world-renowned garden, figures on one hand as the antithesis of what they desire. And on the other, as the *ersatz*, as another quote from Mikey illustrates:

> [O]ur people can't afford to go to Kirstenbosch. […] No, and why should they, is the question mark I ask. I've always said to them we need to create more Kirstenbosches. Don't come tell me there's Kirstenbosch. […] We need to bring that people or the reserves closer to the people. Let them interact and let them find that peace and tranquillity. You know, that has been my fight. Has been from the day we started at... Bottom Road, like I've always said to you, it's only the alpha; it's not the omega of things.

The current order, the dominating logic of engaging and talking about Capetonian urban nature is not addressing the "imbalance" after apartheid, and some Capetonians do not realize that urban nature, and *fynbos*, also belong to them, because the ontological politics of the dominating view—what urban nature *is*—do not accept that Nature is mixed up with an apartheid history, but instead kept at safe distance from culture and people, within nature reserves, studied through computers, and scientific methods.

While the Bottom Road project was on one hand about getting *fynbos* plants in the soil in spaces where they would otherwise never had landed—an exercise that depended on 'black boxes' like Working for Wetlands and Rondevlei Nature Reserve, but also on white paper agreements and residents' own money and time—Bottom Road was also the testing ground for how to fill the project with a political

substance; to infuse the plants—the celebrated and world-renowned 'biodiversity' and *fynbos*—with the memories, screams, and scars of oppression that continuous to walk around, be heard, and be felt in Cape Town. While the material dimension of empowerment in this case study is quite clear—resources have travelled differently—the symbolic reordering is more in-the-making, less stabilized. The result could however be, if the "blueprint" of Bottom Road continues to sustain its many relations and to sustain its ability to travel to other spaces, that also 'non-experts' can claim speech in relation to Capetonian urban nature, and that 'urban nature' can be re-translated as a substance for addressing injustices in an apartheid and postcolonial city.

(b) A 'model' for thinking about empowerment

This brings us to a sketch of a model for thinking about empowerment. If empowerment is the ability to 'change the order of things' in both its material and symbolic meaning, then ANT can be used as a tool to study empowerment. Following ethnographic tradition, this account has striven to show how ANT can be performed in a way that pays tribute to all the trials, all the labour, that goes into the making of durable relations between humans and non-humans so as to carry action. It has—through performing ANT—wanted to fill the notion of "heterogeneous collectives" and "distributed agency" with a meaning that can inspire others to rethink agency—the ability to change the order of things—as not lying within person or groups, but in trials that stabilize relations. The account has also worked with the idea of 'black boxes' as an extreme point of a stabilized actor. It described how 'black boxes' like the Working for Wetlands and Rondevlei Nature Reserve can, from an empowerment point of view, be slightly opened for 'local' actors to connect to 'big' or 'state' actors, luring out pre-packaged resources and making use of them.

However, from the empowerment perspective being outlined here, for such travelling of resources to also be about gaining voice—about empowerment beyond the material—the resources that travel need to be put to work in such a way that they somehow avoid the totalizing logic of the centre from which they originated

(the state, a donor, an NGO, a corporation), and instead be put into use so as to stabilize an actor-network that embodies and strengthens an alternative way of knowing and being, securing a certain autonomy. Drawing on Swyngedouw (2009), empowerment can be linked to the political:

> The political arises when the given order of things is questioned; when those whose voice is only recognized as noise by the police order claim the right to speak, acquire speech. As such, it disrupts the order of being, exposes the constituent antagonisms and voids that constitute the police order and tests the principle of equality.

From this perspective finally, mainstream development discourse, as practiced by for instance the World Bank or the Gates Foundation, could be accused of an obsession with how pre-packaged resources could be moved from one end of a network, to another—from 'funder/helper' to 'poor/in need'—without acknowledging that any (actor-)network building is also about constructing certain logics, knowledge, and modes of being. Thus, a one-sided study of such functional or materialistic dimensions of development, or forms of collective action, although important, fails to grasp that the stabilization of heterogeneous networks is also necessarily about rearranging how the world is known (epistemology) and what the world is (ontology). It seems ANT could serve as a repertoire to engage a more multi-faceted notion of 'development', collective action and empowerment.

6. CONCLUSION

African urbanism has called for new theory-making, and for new registers by which to record and write about African cities. In particular, calls have been made (Myers, 2011; Pieterse, 2008; Simone, 2011) to conceptualize agency and empowerment beyond atomistic individuals (as in economic and rational choice theory) and structural forces (as in structural-functionalist theories), and rather as more fluid, 'networked', and embedded in cultural practices and 'epistemic communities' that fuse action, knowing and being through everyday realities. Although certainly being constructed by Northern scholars, this paper has suggested that ANT, since it lets

itself be transformed, translated, and even betrayed (Law, 1999; Mol, 2010), could provide a humble tool for African urbanism in describing and understanding politics and action, and for seeking platforms for building collective action. For Pieterse (2008: 106) this could help to understand how "agonistic pluralism in the polity" can be produced and made visible, which he views as necessary for emancipatory and sustainable development, and for critical scholarly engagement. This paper has performed ANT in a way to contribute to African urbanism in that spirit.

Acknowledgements

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APPENDIX A. NOTES ON METHOD

I was first introduced to Bottom Road in 2007 by nature conservators working for the city, and returned from 2008-2011 as researcher affiliated to Stockholm University and University of Cape Town. I became a familiar figure, the 'researcher' that asked questions, but who could be gone for weeks, sometimes months, and then return again. In 2008, the project had been on going for a year, with some plants in the ground. I have thus made participant observations almost from the beginning. The account is mainly told from what I have learnt from meeting with residents of Bottom Road, with the logic that in order to trace the particular collective that placed *fynbos* plants in a former dump-site in Grassy Park, I had to start where I found the 'prime movers' (or the first detectable mediators in Latour's language). Like a detective, I went to the scene of crime if you like, to trace those relations that had generated action, and the trials that these relations had gone through to be made durable enough to carry action (Latour, 2005: 121ff). This also meant to listen and learn about what type of knowing that this particular assemblage of actors performs. As such the account is created through a co-constructed process of learning with the residents as research participants or informants (Bernard, 1994: 149ff). In total I have made some fifty participant observations, a dozen recorded interviews, but also taken chances to be invited to barbeque parties and playing soccer with the kids, taking notes. The opportunity of participant observations during a longer time have been of great importance for at least three reasons. Firstly, the making of Bottom Road Sanctuary has almost never resulted in formal meetings between residents and others involved, which would have made it impossible to follow the process—and to trace the stabilization of relations—through any archived minutes. The second reason lies in that getting to know the residents of Bottom Road, most borne in the 1960's with clear memories of street protests during the violent mid 1980's of Cape Town, I increased my own sensibility by which the legacy of apartheid lives in how people talked about and understood their city. It was for instance not until after having known Mikey for more than a year that he started to shift in how he addressed the plants, from naming them with their Latin names and emphasizing ecological rehabilitation, they

increasingly became part of "correcting the imbalances" of the apartheid past. Several neighbours filled in with more details, and these various sources agreed that shared memories of oppression, violence and exclusion, had become part of the coming together through planting and ecological rehabilitation. The third importance of participatory observation, was the opportunity to ask more than one person what had happened since last time I saw them, how things had happened, and how relations between people and things had been stabilized (which is sometimes awkwardly called 'triangulation'). Earlier drafts of this account have been presented to research participants at Bottom Road, and scholars at the University of Cape Town. All personal names in the account are made-up, but based on real persons. Furthermore, although the labels of Coloured, White, Indian and African Black were used as part of a system of oppression during apartheid, they are also to various degrees lived identities in South Africa and Cape Town (Battersby, 2005; Besteman, 2008). Since many I interviewed used these labels to make sense of the world, I have included them. My approach has generally followed the ethnographic urge of Latour (2005), to listen to the actors and let their theories of the world inform the account (see also Bernard, 1994).

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[i] Others have used ANT to analyse aspects of urbanization in African cities, see for instance Odendaal (2011) on information technology and informal traders in Durban. Arguments for how ANT can be enfolded to study urbanization and urbanism, see for instance Amin (2007) and more recently McFarlane (2011) on assemblage thinking and critical urbanism.

[ii] I let empowerment be the ability to 'change the order of things'. This signifies the ability to change the material conditions and geographical patterns of resource distribution (from Marx), and the processes by which the world is known (from Foucault). From a more conventional perspective, we speak of empowerment when such ability is associated with, and works to benefit humans and human groups that from certain perspectives can be viewed as marginalized. The mixing of material and discursive dimensions of empowerment also comes close to how power relations are analysed in urban political ecology (Heynen, Kaika, & Swyngedouw, 2006; Swyngedouw, 2006, 2009). The word-combination 'the order of things' suits an ANT account of collective action very well since with ANT, we seek ways to de-centre human agency as the only or even prime locus of action through including non-humans (objects, machines, animals, plants etc.) as part of and as making up the 'social'. This posthumanist thought can be traced to Foucault who gave his major work on the archaeology of human sciences the title *The Order of Things* (Foucault, 1966 [2005]). Here I make use of the word-combination 'the order of things' although my empirical approach is far more humble than the depth and width of Foucault's archaeology. However, as encouraged by John Law (2009) we can view actor-network theory as 'scaled-down' versions of Foucault's episteme (see main text).

[iii] There is a long debate on the notion of agency and structure in social theory where Giddens' (1984) elaboration of structuration theory viewed agency and structure, not as two poles, but constitutive of

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each other; Harvey (Harvey, 1996: 81) used the notion of "permanences" to describe "how 'things' crystallize out of processes". Likewise, poststructuralist accounts, including ANT, reject the notion of a fixed "underlying structure" from which to causally explain agency or action, and prefer a posthumanist and relational stance where agency is to be located in the stabilization of relations (Murdoch (2006: 68). See also previous footnote and main text.

[iv] Indeed, what is referred to, as the "actor-network" is the scholarly account that describes how relations are stabilized in translating action (Latour, 2005: 108).

[v] Biological accounts (Cowling, 1992; Rebelo, Holmes, & Wood, 2007) report that *Fynbos* is a highly species-rich shrub vegetation type that alongside *Renosterveld* (and other less biodiversity-rich vegetation types) make up the *Fynbos* Biome. This biome has some 8 700 species of which many are only found in the Western Cape region of South Africa (68 % endemism), and many within or close to the city of Cape Town. The main biophysical factors governing vegetation spread and reproduction are fire, (nutrient-poor) soil types, introduced species, and human use of land. *Fynbos* species are very localized; partly due to that specific soil types are needed for particular species to grow. Over a thousand species are deemed threaten with extinction. Here the word *fynbos* is used broadly, as it was by research participants.

[vi] A prime example was the now defunct Cape Flats Nature that aimed to change nature conservation practice to involve local and poor communities at nature reserves close to marginalized areas (Pitt & Boulle, 2010). Other similar examples exist (Ferketic, Latimer, & Silander Jr., 2010; Graham & Ernstson, 2012)

[vii] The practice and discourse of expert-based Cartesian nature conservation in Cape Town needs further treatment. This could effectively follow an ANT approach. In short, this practice is reproduced through employees at the Biodiversity Management Unit at the City of Cape Town and the South African National Biodiversity Institute (SANBI), amongst others. Key steering documents are for instance the Integrated Metropolitan Environmental Policy (2001), the Biodiversity Strategy (2003), the Local Action for Biodiversity program (2006), and a map called the Cape Town Biodiversity Network that prioritizes non-built areas according to their potentiality to host biological diversity. In use is also an Excel spreadsheet called Protected Area Reviews for conservation managers to report on biological diversity. Apart from being grounded locally, the practice is also informed and made legitimate through a global knowledge network of biological scientists, and their organizations and conferences.

[viii] While ANT relies on description to reach understanding, a different form of research and presentation would seek to stabilize more abstract 'factors' to explain what constrains and facilitates collective action at Bottom Road. From such a horizon, the following factors comes to mind: First of all, Rondevlei Nature Reserve lied close to Bottom Road, five minutes with a car and accessible for conservation managers. Second, Grassy Park where Bottom Road lies—classified as Coloured area during Apartheid—is a lower-middle class area with economically more secure households than other areas of Cape Flats. For instance, in most of my conversations and observations, residents referred to themselves as 'coloureds', all had work, or had their own small businesses, with enough money or loans to buy property, and to pay workers if needed. Interestingly, religion seems to play a minor roles, as some went to the Catholic churches in the area, others to the Muslim Mosques, and several did not practice any apparent religion. Third, there was generally a vague idea about *fynbos* vegetation, but all those I met knew that there is a distinction between indigenous and non-indigenous (or "alien") plants and that *fynbos* is to be placed in the former. There are thus various 'structural' factors that could be deployed to explain collective action, for instance that the closeness to a nature reserve played a role, that a self-awareness of a coloured identity facilitated collaboration among certain persons, that the availability of money in a lower-middle-class area could be used to employ labour if needed, and that the discourse on alien/indigenous species structured observed

action. Regardless however, here the focus is on describing the *construction* of collective action, where these abstract factors are of little help.

[ix] It was only later in my fieldwork that residents started to talk to me about the apartheid years. When I first appeared at Bottom Road in 2008, the focus was the plants, and Mikey used to impress me (and other visitors) with naming all plants by their Latin names. My interpretation is, that as residents understood that I was coming back regularly, and that my interest was wider than ecology or biology (in spite that I was then affiliated with the Department of Systems Ecology at Stockholm University), our conversations and interviews shifted. See further notes on methods in Appendix A.

[x] See how other spaces are used to narrate this space. Meaning of space is relational; other spaces are needed to make sense of particular spaces, and in constructing a sense of place (Massey, 2005; Murdoch, 2006).

[xi] In my understanding it is already at these early beginnings, that a new imaginary of space and dwelling takes form.

[xii] Based on the knowledge of conservation biologists, the physicality of the *fynbos* vegetation enters already here, since they know through their own experience and education that the high level of plant diversity exhibited by *fynbos* correlate with specific soil types.

[xiii] The actor-network of Bottom Road, which is being traced here has not upset or challenged the dichotomy of indigenous/alien species. On the contrary, it has lived with this dichotomy since it helped to channel resources to Bottom Road, and as such the actor-network is part in reinforcing this dichotomy. However, the Bottom Road actor-network might not enact the dichotomy as puristically as some conservation biologists might like it. Some non-indigenous vegetation has been left in the soil to shelter from prevailing winds, and trees have been planted that although they were indigenous to South Africa did not historically grow in the Western Cape nor on Cape Flats.

[xiv] Although space does not allow it here, there is (in spite of a lot of voluntary work) an interesting flow of money—made necessary by the *fynbos* plants—that keeps the actor-network at Bottom Road from not falling apart. In a different study, this could be compared to the much greater flow of money that keeps the expert-based Cartesian practice, or actor-network, intact through the payment of salaries for conservation managers, renovating fences etc.

[xv] An unpublished UCT honours project by G Avlonitis (2011) compared the rehabilitation projects at Bottom Road and Princess Vlei (mentioned later in this paper) with expert-led rehabilitation projects at other locations in Cape Town. Using ecological and biological scientific methods, this project demonstrated that the former two did equally well in supporting high indigenous plant diversity, had good plant cover, and attracted an equally diverse number of pollinators.

[xvi] I have heard several versions of this legend. A written account, not more true, holds that the woman referred to as Princess was never killed, but "abducted" and taken on a ship, and that a rain that fell soon afterwards at nearby Little Princess Vlei, became interpreted as the tears of the abducted Princess (Burman, 1962).