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Invisible landscapes: Students' constructions of the social and the natural in an engineering course in South Africa

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Abstract

This paper examines the discourses that students draw on and propagate in a course on rural development in a first year engineering foundation programme. It looks at the way 'rural' is often constructed as 'lack' and therefore 'other', the dangers of constructing development as linear, the ways nostalgia and utopianism feed into discourses of development and how 'propriety' serves to maintain boundaries between nature and people, society and individuals. Different modes and media, coupled with the degree of regulation in the classroom, may enable alternate discourses to emerge or to be suppressed. This paper argues that the curriculum needs to engage with students' views in order to understand, interrogate and critique the kinds of realities they feed into.

Key words

Discourse, narrative, rural development, multimodal pedagogy, social semiotics

The agenda underlying this research concerns extending student access to an engineering curriculum through a pedagogy that values and utilises the diverse subjectivities of students. The curriculum site is a Communication Course in an Engineering Foundation Programme that focuses on rural development in South Africa. Having taught this course for a number of years, I became intrigued by the underlying views, beliefs and stories around development that emerged when I probed

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the students in surveys and interviews, and when I looked at the texts they produced. It is clear that the students draw on a range of discourses to construct their views on development in particular ways. Students often constructed the concept of rural in terms of 'lack' or an 'other', which impacts on how they envisage development. Also, they often see development as a simple linear process, with the result that they imagine the rural in terms of a nostalgic past, on the one hand, and as a context of lack of development and poverty, on the other. Development is then imagined as leading to a utopia. Rather than ignoring these views, I argue that it is important for the curriculum to engage with them in order to understand, interrogate and critique the kinds of realities they feed into. In order to do that, it is important to understand and create diverse discursive contexts to enable students' discourses and narratives to emerge.

Context of research

I will begin by outlining the context, content and aims of the course. The course forms part of an academic development programme at a South African university. The students in this programme enter university via an alternate access route with entrance criteria based on potential and not final school leaving grades, due to the inequitable educational opportunities afforded them. The academic development programme structures the students' learning experience by extending the period of study and by including courses aimed at developing academic literacy practices. Most of the 80 students have English as an additional language and the Communication Course concentrates on developing students' academic literacy in English.

The course attempts to engage with clearly defined tasks of interest to the students within a meaningful curriculum. It is designed around a particular project,

namely the Rural Village project, which introduces the idea of sustainability, seeing engineering as creating a more socially just and environmentally sustainable world. In teams of four, the students investigate the infrastructural and developmental needs of a rural settlement. Aspects such as power, transportation, housing, water and sanitation are investigated. Their findings are presented in individual written reports and in a team-produced poster. At least one team member needs to come from a rural area or have close knowledge of a rural area. Reciprocity is set up as a principle in the teams: the person who has knowledge of the village is to be used as a resource by the others. Thus, novice-expert relations are established, where students exchange their mutual knowledges in an environment which values these. It is hoped that, in the process, some notions of 'disadvantage' (including connotations around 'ruralness', discussed later) may be redefined in an environment of mutual respect.

The content of the Communication Course has thematic coherence in terms of the work that an engineer in a developing country would need to do. The course aims to bring aspiring engineers to a reflexive consciousness of the contexts and consequences of their practice. The rural focus provides a way of questioning stereotypes, legitimating diversity in the classroom and engaging with some of the challenges facing South Africa at the moment.

Outlining the 'contours of invisibility'

The students participating in the course construct legitimate texts for assessment purposes, but there are still traces of the 'unsayable' in these texts. The unsayable and the invisible comprise aspects of memory, desire, identity, ritual, superstition, beliefs,

propriety, stereotyping and othering, 'home', emotions, nostalgia, the intimacy of violence, particular kinds of narratives and a range of subjects considered taboo. In attempting to probe these, I began to define the notion of 'contours of invisibility' as both pedagogical and modal. In terms of pedagogy, something is invisible only from the perspective of the dominant context. Bernstein (1996) talks about the symbolic barriers and thresholds between and within discourses in the classroom. He argues that attempts to change the degrees of insulation between discourses and practices reveal the power relations on which a classification is based (Bernstein 1996, p.20). Thus, in a pedagogical setting, certain discourses, views and beliefs are regarded as legitimate and others are regarded as inappropriate or unsayable. The key question is: whose power is maintained by whose boundaries?

In terms of mode, I contend that different modes and media, coupled with the degree of regulation in the classroom space, may enable different discourses to emerge or to be further suppressed (Archer 2006, 2007). By mode I mean a fully semiotically articulated means of representation, such as language, image or music (Kress 2000, p.185). Many aspects mentioned above, such as views on childhood, relation to home and firmly held beliefs, were mentioned in the less regulated space of an oral interview, and were suppressed in the more regulated written and visual texts produced for assessment. Stein (2008) argues that students use the written mode to express the public self and the visual mode to express a more private self, as the visual mode offers more space for ambiguity and expression of the 'unsayable'. For this reason, she argues, different semiotic modes need to be legitimated in the classroom. What interests me is the degree of regulation of the oral, visual and written modes, and the affordances of these for expressing the more 'invisible' discourses that feed into students' views on development.¹

In order to probe students' 'invisible' views on nature and development, I conducted a survey on 80 students, interviewed 13 students and analysed some of the multimodal texts that the students produced, including posters, essays and reports (Archer 2004). I analysed this data in terms of a social semiotic multimodal approach, which focuses on the relationship between texts and the social practices they realise. According to Halliday, 'social semiotic' means 'interpreting language within a sociocultural context, in which the culture itself is interpreted in semiotic terms' (1978, p.2). In this paper, I concentrate my analysis on two student posters produced at the end of the course. I have supplemented this textual analysis with interviews, as it is clear that what counts as data for the process of meaning-making are both the produced texts and the students' verbal commentary accompanying them.

The analysis is based on the assumption that discursive practices are ideological in the ways in which they serve to maintain existing social relations of power (Fairclough 1992, Gee 1996). All semiotic systems operate as systems of social positioning – at the level of interpersonal relationships and at the level of struggles for hegemony among social groups in any society. Texts are thus never monolithic, but reflect and recycle different discourses. Some of these differing discourses may complement each other, and others may compete with each other or represent conflicting interests or ideologies. This is Bakhtin's (1981) notion of dialogism, the recognition of the polyvocality of any sign. In my analysis of the two students' posters, I attempt to tease out some of these contradictory discourses.

Constructions of 'rural'

In the Communication Course, we work with notions of what the term 'rural' can mean and talk about the difficulties of defining a rural area. Rural/urban is a strong

binary division in South African society. Even though relatively few students on the course reported coming from a rural area (about 25%), the reality in South Africa is that many students move between rural and urban settings. This is one urban student's description (during an interview) of his grandmother's village, which he used to visit in the school holidays:

I know one village in the Ciskei where my mother comes from. And the toilet is like so far away... it's like in the yard, but the yard is like very big. It's a big garden with trees and stuff and then the toilet is right at the bottom of the garden. And then, to get to wash your clothes you have to go down to the river, which is like 10 km, you know. And, to get water, also you have to get a big bucket and you have to walk down to the river, get water, walk back.²

The student describes the village in terms of its difference to the urban areas; in particular, he comments on the open spaces and vast distances. Many of the students revealed this knowledge of and connection to rural areas, even if the commentary on vast distances functions as a distancing device, marking it as other rather than intimately familiar. It is common for urbanites to have family in rural areas, due to South Africa's complex history of migrant labour as a result of artificially created 'reserves' or 'homelands' (like the Ciskei, mentioned by the student above). The apartheid vision for these 'homelands' was that their populations could be led through various stages of constitutional development towards the attainment of sovereign independence (Sharp 1988, p.91). In reality, however, they were reserves for cheap labour, used particularly to service the mining industry. Apartheid spatial planning thus created a rural landscape devoid of economic opportunities and local markets and dependent on distant cities and towns for employment, goods and services.

It is difficult to establish the parameters by which 'rural' can be defined. According to the state's Rural Development Framework (1997), which was developed by the Reconstruction and Development Programme (RDP),³ rural areas are defined as:

...sparsely populated areas in which people farm or depend on natural resources, including the villages and small towns that are dispersed through these areas. In addition, they include the large settlements in the former homelands, created by the apartheid removals, which depend for their survival on migratory labour. (1997, p.2).

A feature of this definition is that 'rural' here is defined by 'lack'. This view of rural as lack was dominant amongst the students, although it was occasionally tempered by a nostalgic view, a hankering back to something pure and valued, and to a sense of community.

The survey I conducted on the students focused on their perceptions of and attitudes to 'rural' and 'home'. One of the questions to the students was whether they reside in a rural area and, if so, why they would define that area as rural. Their responses were explored further in interviews. Different aspects of 'ruralness' were not overly emphasised in the responses. Instead, 'lack' was foregrounded on many levels. Lack of infrastructure was specifically mentioned: 'The municipality is not responsible to bring services to the place', 'It just got electricity in the past two years' and 'Not all the roads are tar roads. The water supply is not good'. Lack was also often couched in evaluative responses, such as the following: 'It has no night clubs, the life is dull and conservative'.

The stereotypes and presuppositions attached to the 'rural' in South Africa seem to be so strongly prevalent that some students, although describing themselves as 'rural', felt the need to define themselves against these stereotypes. Of Nqamakwe, in the Eastern Cape, a student says: 'It is classified as a rural area, but the conditions we live under are better than those of rural areas'; of Ulundi, in KwaZulu-Natal, another reports: 'It has no factories and firms and only one plaza but it is also a bit civilised'. Here the student feels compelled to reject presuppositions of what a rural area is like, and the judgements attendant on them (namely, 'uncivilised').

The unclear boundaries between rural and urban are highlighted in the students' responses. For instance, one student who claimed to come from a rural area described it as 'a sort of township'. However, a 'township' is a distinctly urban area and was the term commonly used for urban areas designated for black people under apartheid. The students' attempt to classify an area as 'rural' appears to activate this history of racial segregation. These differences in definitions of 'rural' are highlighted starkly in the following two responses from students:

'Sometimes we could finish a month without water and electric failure. Outdoor toilets, coal cooking stove' (a description of Diphehli, Northern Province).

'It is still developing in a way, a shopping mall has just been built. It's a semi-rural residential area' (a description of Daveyton, Gauteng).

In the latter quote, it is clear that the student is battling with a definition of 'rural', and opts for the concept 'semi-rural'. Daveyton is not defined as a rural area according to the state, but is very poor, and perhaps 'ruralness' and poverty are seen as synonymous here.

Although the definitions of 'rural' were contested and contradictory in the class, there was also a strong communal sense of what rural South Africa looks like. Agriculture was mentioned as a source of income that distinguishes rural areas from urban ones, and the tending of herds of cattle, goats and sheep were highlighted, even if only as a rural ideal. Students also identified features distinguishing the rural as: different social organisation ('There are no town-councillors. There is only a chief'); poor power supply, water supply and sanitation systems (outside toilets, no water in the kitchens); self-built housing (often from grass and mud); poor roads (mostly untarred); few shopping centres, schools, sports centres, hospitals or cultural centres; and poor access to advanced technologies. This description of rural South Africa from the students' responses describes the features of poverty in South Africa. The rural

development task team of the RDP found that almost 75% of people below the poverty line in South Africa live in rural areas (Rural Development Framework 1997, p.2). The dire state of the rural areas partly stems from the long period of apartheid, with its discriminatory policies and neglect of the majority black population. Forced urban-rural migration led to over-population of former 'reserves' and deprivation of basic needs. Landlessness and overcrowding in rural areas and inappropriate farming methods have given rise to severe soil erosion and land degradation.

The struggle over definitions of the term 'rural' is crucial in raising an awareness of the conditions in rural areas, as well as the connotations around 'ruralness' and how these perceptions may feed into a development agenda.

Creating cultural landscapes

In trying to tie together the ideas of 'rural', 'home' and society, the Communication Course draws on the concept of 'landscape', which is used both literally and metaphorically. Landscape is the result of human activity and is therefore always social and cultural. The most common understanding of the term 'cultural landscape' is that of landscape as ecological artefact: earth transformed by human action (Head 2000, p.55). However, in the World Heritage definition there has been a change to include the category of 'associative cultural landscape', which has emerged in 'recognition of the intangible dimensions of landscape, and interactions between the physical and the spiritual/symbolic' (Head 2000, p.83). In my understanding, all landscapes are cultural, and the concept covers the visual and material, as well as the symbolic environment. Of particular relevance to the concerns of this particular course is the interaction between culture and nature, symbolism and materiality, past and present.

People inscribe themselves onto a landscape, and one of the ways of doing this is through selective memory. For example, in an interview, a student, Bantu, spoke of the village the group had chosen for their research. Bantu grew up in that village, and said that in reconstructing it for his peers, he had constructed the village of his childhood, not the current village. For instance, he mentioned a lack of electricity, whereas the village is now fully electrified. He also spoke about tending the cattle every second day (alternating with school attendance) and how he developed a rapport with the animals. The link between memory, narrative and landscape evidenced in his accounts of the village often manifested nostalgia. According to Stewart, the past that nostalgia seeks 'has never existed except as narrative, and hence, always absent, that past continually threatens to reproduce itself as a felt lack' (1993, p.23). In autobiographical narrative such as Bantu's, time is placed into a personal history, where the past is given meaning in the present. Freeman and Brockmeier (2001) argue that the appraisal of the past in autobiographical narrative is almost inevitably conditioned by some notion of the 'good life': 'normative ideas of what a life is, or is supposed to be, if it is lived well' (2001, p.75). Narrative, therefore, is often about 'mythopoeic desire' – 'a desire to raise our existence to that level of meaningfulness, of sacred integrity ... more readily found in times past' (Freeman 1998, p.45).

The mythopoeic desire is also evident in the following narrative about the naming of a village. Here powerful constructions of the physical, social and symbolic landscape are achieved. One group of students focused on a village called 'Nobody Village', which they claimed was the accepted name for the area. The student who came from Nobody, Mthoko, described the mythology behind the name of the village:

There was a man who – it was a White man – stayed on the other side of a mountain ... He was with his family, but that day the family went out, so he remained there alone. They went out, so he just got sick. He passed away because of suffocation. So, while the suffocation was trying to attack him, he

pleaded for help. And then people never heard him because it was far away from their houses. But one man was trying to pass. He passed the house and he heard the plea and when he goes inside the house he found the man about to pass away. Now, this man's last words was, 'Nobody is here'. And they just came and asked the man, 'What did that man say?' And he just said, 'Nobody is here'. The people who use English just a little bit, they just said, 'OK, this place is "Nobody"'. Just like that.

The story behind the naming of the village has become mythologised through the perpetual re-telling, and the landscape is 'owned' and defined in a particular way by the assigned name. The story reflects a colonial past, as well as an existential state of abandonment and desolation. Through bringing some of these 'invisible' cultural landscapes to the forefront of discussion, the course attempts to create discursive spaces to enable students to situate particular cultural practices within the broader systems of meaning and values that sustain them, and also to highlight cultural practices as complex sets of meaning that are sometimes in tension with each other.

Two student posters on rural development

In order to probe further the ways in which the students construct the relationships between society, nature and technology, I will now look at the posters produced for assessment purposes by two groups of students on the course, namely the Nobody Village poster (see figure 1) and the Efolweni Village poster (see figure 2). The poster representing Nobody Village is an ordered scientific text. The introduction provides important demographic detail on the area (such as types of employment and income), a clear listing of the problems of the area and the criteria for development. The concept of sustainability exists alongside a sense of pragmatism; for instance, the recommended switch between hydroelectricity and electricity off the national grid, depending on the water flow of the river. The elements of composition of the poster are linear, in that there is a clear left to right reading path, and the written text is

strongly framed by consistent use of borders. The poster is divided into infrastructural problems and each of these is looked at separately.



Figure 1: Nobody Village poster.

The Efolweni Village poster is organised along a set of binaries, presenting a 'before' and 'after' scenario. The 'before' scenario is a statement of the problems experienced in the village. The children present a dire situation. They are both standing and looking out of the picture frame towards the viewer. The older boy is helplessly sucking his thumb and the younger boy is pointing at the dried-up tap,

presenting the situation to the viewer. The children are engaged in functional and survival activities. The ‘after’ scenario shows suggested proposals to address the problems, followed by the ‘outcomes’, the proposed future for the inhabitants of the village. The children are presented in relation to each other; they are preoccupied with their own activities and are oblivious to the presence of the viewer. The dry earth is transformed from an area of hardship to a designated play area – a sand-pit.

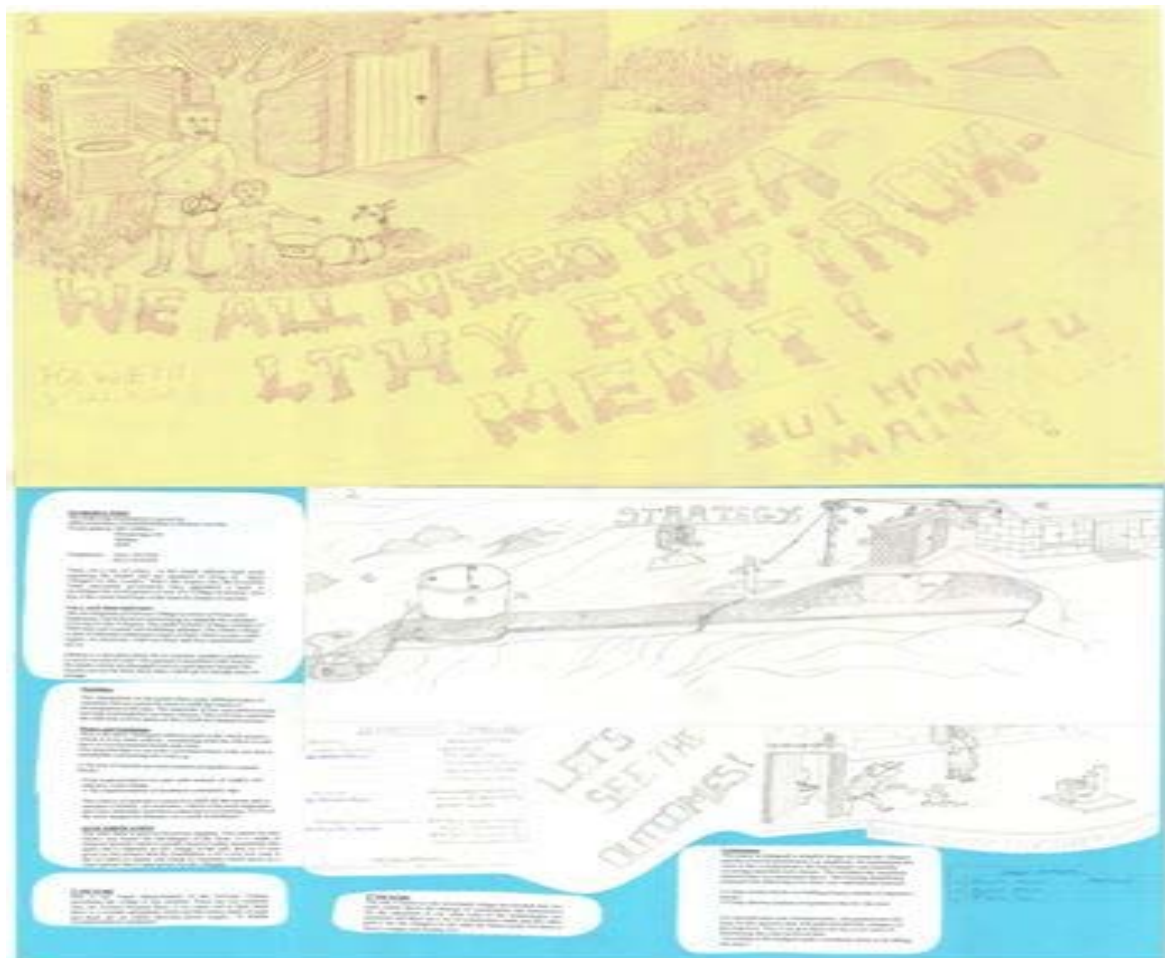


Figure 2: Efolweni Village poster.

I will now look at the different ways in which society and nature are represented in these two posters in order to identify some of the discourses operating in the texts.

‘Nobody and Co.’: Representing the social and the natural

Through the interviews and classroom discussions, I got a sense of the ‘people’ comprising Nobody Village, the wear and tear of crime on that society, the reactions to this by the staging of people’s tribunals and the formation of crime prevention societies. However, in the student-produced poster, the village is represented as a physical landscape rather than as a community of people. The photographs (taken with a disposable camera I issued to the students) represent the landscape and there seems to be ‘Nobody’ in the village. This is in contrast to the photographs that other students took of their villages, some of which were strongly peopled. The invisibility of the people is reflected in the text on the poster as well, where electricity, water, sanitation and road options are investigated, but without reference to the population of the village: ‘There are a number of reasons for the village to be developed. The village has a shortage of resources and it is not in good condition’. The inhabitants are mentioned in the introduction, mostly as statistics: population size, average number per house, ratio of men to women. The criteria for development focus on the infrastructure, the environment and cost effectiveness. They are not overtly about the people in the village. The only personalised mentioning of the community is of the ‘Mapokgo a mathamakga’, who are described as ‘a group of old men preventing crime by beating up people who commit crime’.

Although the social is largely absent in the photographs and in the main body of writing on the poster, it does surface in the captions, some of which are written using lexicogrammatical constructions often associated with the language of advertising: ‘Beat the thirst’ and ‘The electrifying one’ are reminiscent of the sloganeering common in commercials. Perhaps the use of the language of advertising in the captions is the only way the students could conceive of including the social, providing humour and injecting a human element into the poster. In this way,

infrastructural problems are highlighted: ‘Shops or disposal sites?’ and ‘Good for tug-of-war. Exposed water pipes in the streets’. However, there does also seem to be a sort of journalistic ‘othering’ going on here – an authorial distancing from the hardships and an almost tongue-in-cheek look at the plight of the villagers.

Instead of focusing on people and the social aspects, the importance of the environment is emphasised in the Nobody Village poster. The forces of nature are portrayed as active agents:

Deeper furrows could be dug to a depth that is beyond erosion’s reach to bury these exposed pipes.

The land enables people to plant maize, peaches, sweet reed, watermelon and other types of vegetables.

Making ‘the land’ the subject and agent of the second sentence, the students convey the sense that the land determines the rhythms of life, rather than people. There is an idea of ‘cycles of nature’ in the description on the poster of the crops, seasons and rains: ‘different climatic factors such as heavy rains, strong winds and thunderstorms’. Here variable, unpredictable and tempestuous nature is emphasised, and nature is represented as an agent. The importance of the environment is also indicated visually through the choice of font and green card for the poster. The font of the heading ‘Sustainable Development in Nobody Village’ resembles cracked earth, clay or parchment and evokes the dryness of the earth as echoed in the photographs. The colour green is often used as an indicator of environmental awareness, signifying growth and rebirth. It is an interesting signifier in the context of this poster, where the green card sets up a strong contrast with the dry, dusty ‘yellowness’ of the photographs of Nobody Village, and resonates with the description of crops, growth and cycles of nature – the peaches, sweet reed and rains.

The Efolweni Village poster represents a quite different view on ‘nature’ and people’s relationship to it than the Nobody Village poster. In the ‘before’ scenario,

there is a lot of vegetation (trees and plants) around the house and 'nature' is seen to be encroaching on 'civilisation'. The children and material objects (like the water tap) are in direct contact with the earth, which has the status of 'dirt'. In the 'after' scenario, boundaries have been set and there is no vegetation in the domestic realm. Also, nature has become mediated and there is no direct contact with the earth. One boy sits on a chair and the other on a blanket and both wear shoes. The tap is mounted on a special pedestal, and the toilet is placed on a concrete block. The shift from organic building materials (mud and wood) to manufactured materials (bricks and corrugated iron) also reflects this notion of organising the environment by eliminating what is ideologically classified as dirt. According to Douglas, 'dirt offends against order. Eliminating it is not a negative movement, but a positive effort to organise the environment' (1966, p.2). She argues that by 'cleaning' we separate, place boundaries and make visible statements about the home we create out of the material house (1966, p.68). This is pertinent to the Efolweni poster, where the emphasis in the 'after' scenario is on home, representing order, cleanliness, limited contact with the environment and clearly defined boundaries with nature.

The Efolweni Village poster thus seems to say that 'development' can only be achieved through the drawing and maintaining of boundaries between humans and nature. In this poster, unruly nature is represented as synonymous with underdevelopment and direct contact with nature is deemed undesirable, whereas circumscribing and controlling nature is represented as 'developed'. There is no such notion of dirt in the Nobody Village poster, where the dusty environment is represented as fruitful nature.

Propriety and the upholding of boundaries

The final Nobody Village poster produced for assessment is objective, clear and coherent. This is opposed to the discussions around the poster production, which were more subjective and drew on different and local mythologies, such as the name 'Nobody' and stories about 'witchcraft' in the village. In the interviews, the students spoke about what they called 'witchcraft', whereas in the poster they emphasised a town-planner's perspective of infrastructural development. These are different engagements with the same world. Each representation enables one route into understanding the subject and the composite students' view of the village is the combination of these representations in different modes. In a curriculum with largely formal written assessment tasks, it is clear that the 'spoken' is part of what becomes 'invisible'.

In the surveys, I asked the students what they thought other people's perceptions of their home town were. Mthoko answered, 'Sometimes they think there's a lot of witchcraft there. That's one of the perceptions, that it's a dangerous area. And some witches were burnt'. In the interviews, I took the opportunity to interrogate him further on this, and he told the following story:

Ja, there was a woman there who was so cruel. Ja, she was cruel and lots of the people, they said that she is a witch. Cruel like, sometimes you can greet the lady, she keeps quiet ... When you pass, she insults you and says, 'How can you just pass me?' She insults, ja ... Then things like those ones they are happening. The people, when they check the woman, she's so cruel, then people just decided she is the witch. Let's burn them. Just burn them.

The student goes on to recount how both the woman and her husband were tried and killed and how the police came and arrested the whole community, except for the old people.

They called a meeting, community meeting to a certain primary school. So, people went there, even the woman went there – she never knew what's gonna happen. And then when she realised that, OK, that we're talking about her ... she can't run away, they just gonna catch her. And then, thereafter, they drove her to her house, 'Are you a witch? Why?' Sometimes they just forced you to say yes. Also, they found her husband and her husband said to the community, 'I been

telling her a long time, she must stop. During the night I just sometimes find her not being there. How could she go out? I don't know.'

The student's interpretations of the events reflect an understandable ambivalence. He draws on different discourses, both mystical and sociological in order to make sense of the experience. On the one hand, he claims 'there is a witchcraft everywhere in Africa ... Africa has a power,' and, on the other, he recognises that 'sometimes they just forced you to say yes' in order to confess to doing or being something. The student's ambivalence is evident in his use of pronouns, which also indicate both insider and outsider status. The 'we' in 'we're talking about her' includes himself as a member of the community. The 'they' in 'sometimes they just forced you to say yes' sets up a distance between himself and the community, and the use of the pronoun 'you' here represents a generalised individual in the community, which may or may not include himself. The student as narrator is both an insider and an outsider to the events, as well as an insider/outsider to the new context at the university, and possibly an 'emerging' outsider to his village by virtue of being at the university.

The student's narrative is interesting, because, as mentioned above, it provides a completely different perspective on Nobody Village to that previously encountered in conversations during the course and on the texts produced for assessment. The comments come from a sensibility of communal responsibility and accountability, and they reflect a strong notion of 'propriety', which is a key discourse in the students' textual productions. Propriety functions by favouring the collective over the individual and therefore maintains communities through the establishment of societal boundaries. As Douglas observes, these kinds of accusations are essentially 'a means of clarifying and affirming social definitions' (1970, p.xxv). The student refers to 'not greeting' as a social ill. This kind of accusation often reflects an unresolved conflict between the neighbourly conduct required by the ethical code of the community and

individualistic forms of behaviour, and thus reflects a society in transition (Mayer 1954). Whereas propriety featured strongly in discussions about Nobody Village, it did not emerge significantly in the poster. There is little sense of an ideological position regarding what is appropriate and acceptable, either socially or aesthetically. In contrast, propriety features strongly in the Efolweni Village poster, where boundaries between private and public spaces are defined and delimited around the notion of dirt, privacy and shame. For instance, the toilet has no door in the 'undeveloped' village and is full of flies, but in the developed village it is represented as both clean and private. In the Efolweni Village poster, propriety is realised semiotically through the representation of the body in society, and is inextricably linked to notions of 'development'. The importance of being clothed is emphasised as a separation from nature. In the 'before' scenario, both children are barefoot and partly unclothed; their partial nakedness embodies the notion of propriety where shame is linked to dirt, whereas in the 'after' scenario, the children are clean fully clothed and wearing shoes.

Since a discourse of propriety was so prevalent in the students' texts and discussions, it is worth thinking about how such a discourse could relate to an engineering curriculum. Although propriety defines a moral view on adherence to convention in a specific context, it is also about being able to read a particular context and make decisions deemed appropriate to that context. In this sense, it is a crucial resource in decisions about meaning-making. A discourse like propriety could thus be used in the classroom to reflect on meaning-making and cultural practices. In upholding the collective and not the individual, the discourse of propriety can be aligned with certain notions of development and could perhaps be used in the development agenda, where the community and the common good are emphasised

over the individual and individual gain. A discourse of propriety could be usefully utilised to promote the idea of sustainability with an eye to subsequent generations. However, the more negative aspects around boundaries, including notions of insiders/outside, othering and the general sense of ‘moral highground’, need to be raised and discussed. In this way, the pedagogical aim would be to break down the symbolic boundaries between and within the different discourses circulating in the classroom, surfacing the ‘invisible’ discourses in order to engage with them and even to harness them.

The village of my childhood: Nostalgia and utopianism

Earlier, I pointed to the strong link between landscape, narrative and nostalgia. There is a complex interplay of nostalgia and utopianism within and across the two students’ posters, and it is worth exploring this in some depth. It is tempting to see a neat relationship between optimism and future orientation and between pessimism and an orientation that is retrospective. However, it is not always this clear cut. Nostalgia tends to evoke an impossibly positive past and utopianism evokes an impossibly positive future. Interestingly, both point to a sense of lack in the present. Both are ‘hostile to history and its invisible origins’, and yet long for “an impossibly pure context of lived experience at a place of origin” (Stewart 1993, p.23).

The visuals on the Nobody Village poster represent nostalgic timelessness – what ‘is’ and what has been for a long time, as opposed to the written text, which emphasises development, change and what ‘could be’. Nostalgia in the Nobody Village poster is particularly expressed through the juxtaposition of the photographs and the captions. The caption beneath the wide-angle photograph of the village reads: ‘Peaceful winter. The spatial distribution of the houses in the village’. In this caption,

there is a clash of orientations, where the orientation of the engineer town-planner interested in the 'spatial distribution' coexists somewhat uncomfortably with that of nostalgia where the term 'peaceful' indicates a state of calm and idyll.

The use of photographs is an important representational choice, which contributes to the semiotic realisation of nostalgia. Within photographic images, people and places are locked into a particular past; they point to 'what *was*, but not longer *is*' (Metz in Otto 2005). Thus, the photograph exemplifies the condition of nostalgia (its pseudo-presence evokes a sense of absence): 'Precisely by slicing out this moment and freezing it, all photographs testify to time's relentless melt' (Sontag 1979, p.15). Another affordance of photography is the ability to arrange life in such a way that the more unpleasant aspects are systematically erased. The images of Nobody Village do seem to suppress the more negative aspects of the area. For instance, the photograph of 'Peaceful winter' evokes a distant landscape and, together with the caption, is an incitement to reverie. None of the photographs show the nitty-gritty of the area – the crime, grime and real effects of poverty. This nostalgic idealisation could be due to the students' homesickness or sense of alienation from Cape Town and the university environment. When comparing home to Cape Town, Mthoko from Nobody Village said:

My problem is the life here, I don't like it. I like the life at home. Sort of quieter and slower. You can just go out and shout to your neighbour, 'Good morning!' Things like those ones, I like that. Here in Cape Town, you can't shout.

This student seems to be experiencing nostalgia for both nature and the village community, or for a few alleged attributes of it, such as the slower pace, quietness and neighbourliness.

The photographs in the Nobody Village poster do not overtly explore any of the suggestions and possibilities for development of the village. Photographs of litter

and the underground water potential are allotted prime space on the poster (on the top left); the former describes what 'is', whereas the latter, captioned 'Beat the thirst', describes what 'could be'. The 'Beat the thirst' image is the only photograph on the poster that overtly points towards potential (the ideal), rather than representing a version of the existing situation. In an abstract way, however, the photographs of Nobody Village do articulate a forward-looking vision through their featuring of the horizon: the water tanks are lined up with the horizon, the dust road tapers off into it, and the shops are placed on it. The wide angle photograph of the village as a whole is divided in half (horizontally) with blue sky occupying almost half of the image. These open horizons create a feeling of expansiveness and space, a sense of possibility.

The Efolweni Village poster, in contrast, has a particular view of development, which is necessarily about 'change'. This emphasis on change would seem to be antithetical to the conserving nature of nostalgia. Since change is equated to 'Westernisation' in Efolweni, there is a strong emphasis on the move from traditional building forms, such as mud for houses, to more 'Western' building materials, such as bricks. However, the idealising thrust of nostalgia is preserved in the utopian terms in which development in Efolweni is envisaged. Development is represented as 'nurturing' through the presence of the mother-figure, as well as ordered, harmonious and clean. The utopianism is reflected in the colour of the poster card, where the 'before' scenario is in yellow, connoting dry, parched earth and barrenness, and the 'after' scenario is in blue, perhaps indicating 'blue skies', horizons, possibilities and the future. A utopian desire for things to work out harmoniously is reflected in the following student reflections: '...the other part [of the poster] is for the villagers to see what the future holds for them. It shows a happy and healthy life. It would seem that nostalgia and utopianism are two very inter-related aspects of a society in

transition such as South Africa, and thus emerge in ambivalent and dialogic ways in the students' representations.

Rural as 'other'

I have already discussed how an apprehension of the failings of the present is a prerequisite for nostalgia. Another prerequisite could be a secular and linear sense of time. The twentieth-century, Westernised world has been built upon a concept of time and 'progress' as linear, of the past, viewed as stable, and the future, seen as unknown and unknowable' (Otto 2005, p.463). This linear perception of time feeds into nostalgia, as time lost cannot be instituted again.

Although Bantu's choice to represent his village, Tabankulu, in a 'past' form could be construed as nostalgia, where the present is denied and the past takes on an authenticity of being, it is also a form of 'othering', where otherness is constructed in relation to temporality. The student chooses to represent Tabankulu in a temporally distanced way, in a phase in its development where there was no electricity, which coincides with a particular period in his childhood. Fabian argues that the opposition present/past is linked to the oppositions of civilised/savage and subject/object, and is based upon assumptions of spatio-temporal distance:

Anthropology appears to have been a field of knowledge whose discourse requires that its object ... be removed from its subject not only in space but also in time. Put more concretely, to belong to the past, to be not yet what We are, is what makes Them the object of our 'explanations' and 'generalisations' (Fabian 1983, p. 197).

The process of 'othering' is thus related to a linear view of time and development discussed above, and occurs through temporal distancing. However, a linear view is clearly insufficient when thinking about experience of time – interpretation and memory require a view of time more like a spiral, 'embodying a dialectical movement

from present to past and past to present, at once' (Freeman 1998, p.42). In this view of time, the pattern is embodied in the spiral, as opposed to an historical trajectory which is embodied in a line.

The notion of the 'other' is constructed through temporal distancing, but also in other ways, such as through patronising discourses of 'aid' or through the construal of rural as 'lack'. In some instances, the students from rural areas reproduce themselves and their lives in the village as 'other'. In this case, 'self and other are mutually constitutive, identification and objectification go hand in hand' (Hallam and Street 2000, p.250). Thus, contradictions and tensions in the perspectives on development are evident in the students' texts. At times, the students' texts espouse democratic inclusion, yet at other times, authoritarian discursive constructions create a distance between the engineering students and the villagers. The discursive conflicts play out in the representation of 'us' and 'them', which sometimes mirrors the conflict between students' emerging identities as engineers and their previous identities as rural people. Self and other are not stable unitary categories, but shifting and somewhat contradictory constructs.

In the Efolweni poster, the representation is made as an outsider to cultural practices – it encompasses a view of the village as a 'problem' to be solved and the villagers as children in need of saving. The social is realised through the metonymic use of the children to represent the village as a whole. Cartoon-like drawings serve to represent development through the depiction of a particular scenario with specific characters. The villagers are represented as having little agency or interest in the processes of development. In describing the Efolweni Village poster, the students say the following:

This poster is intended for both the rural community and engineering professionals because it consist of two parts, the simple representation of the village and the

complicated structures showing the construction of the underground pipe installation and other complicated items which are difficult for the uneducated villagers to understand.

There is a dual sense of audience here, which constructs the engineers and the villagers as distinct. The engineers are constructed as only interested in technology (not the social) and the villagers are constructed as only interested in the social (not the technological). ‘Realism’ and the ‘norm’ are constructed in terms of social organisation – who can and who cannot participate in certain processes.

The decision to depict the situation through children is reminiscent of global media representations of development, which are often linked to requests for ‘aid’. The viewer is invited to identify and empathise with the children through their direct address to the viewer. The notion of development here is constructed as a uni-directional process, rather than a process that combines both the local and the imported, the internal and the external.

I have argued that although the course emphasises sustainable development arising out of communities, the students’ texts often represent rural as ‘other’ in contradictory ways. Inclusion in democratic processes is emphasised, whilst couched in an ‘us’ and ‘them’ orientation. Development as organically arising out of local needs and resources to ensure sustainability is juxtaposed with a notion of development as ‘aid’ from outside the particular community. Development as ‘modernisation’ and ‘westernisation’ co-exists with notions of embracing local and indigenous knowledges and structures, and views of ‘modernisation’ often become enmeshed in a linear view of development.

Implications for changing pedagogical landscapes

Making meaning in a tertiary context, on the one hand, draws on and responds to discourses from the different domains of the students' socio-cultural life worlds, and, on the other hand, responds to discourses and practices within the institution.

In the two students' posters that I looked at in some detail, the identification with the role of consultant engineer enables more of a distance from the issues of development, which sometimes results in complex constructions of the 'other'. Perspectives on development as expressed in students' texts are contradictory – at times they espouse participation and at other times they espouse authoritarianism, an 'us' and 'them' divide. Discussing these contradictions with students as part of the curriculum could create awareness of how ideology functions and encourage them to interrogate their own ideological positions. A curriculum which draws on students' experiences and discourses could provide an opportunity for students to begin to interrogate their past situations, as well as their future aspirations. They could also start to think critically of engineering as a profession within the context of South Africa. Worldwide there has been an increasing acknowledgement that engineering is a social activity with political, ethical and economic dimensions, which has led to an attempt to balance technical and non-technical aspects in engineering education and curricula designs (Wulf 2004, Horak 2003).

In the texts the students produced, development is largely constructed as the taming or harnessing of nature. In this view, nature is no longer seen as an agent in people's lives, nor the provider of mystical signs. In order to fully understand what sustainable development could possibly mean in a country like South Africa, these views of nature and the relation between the social and the natural need to be explored with the students. They also need to be discussed alongside students' views of 'rural' and the perceptions of rural as 'lack'. Current land ownership and land development

patterns strongly reflect the political and economic conditions of the apartheid era and it is therefore important to interrogate these and students' perceptions around them.

I have argued that the 'contours of invisibility' are both modal and pedagogical. It does seem that the visual genre of the poster enabled students to utilise discourses seldom used in engineering, such as the discourses of development, propriety, utopianism and nostalgia. It could be something about the visual mode or the combination of the visual and written modes that enables some kind of 'play' between standard Western scientific discourse and the discourses emanating from students' lives. Often these discourses manifest in the images or in the interaction between the image and the written caption, as in the Nobody Village poster. The visual mode can perhaps enable and accommodate mixed domains of practice more easily than the written mode for this particular group of students, but aspects that emerged in the oral mode in an unregulated classroom space (such as in interviews or class discussions) were still suppressed in more regulated contexts.

Bernstein regards pedagogic practice as a 'fundamental social context through which cultural reproduction-production takes place' (1996, p.17). However, he does speak of a potential discursive gap, which can become a site for alternative possibilities, for alternative realisations of the relation between the material and the immaterial. He suggests that this potential gap is the site for the unthinkable, the site of the impossible, and that it can be both beneficial and dangerous at the same time. Any distribution of power will regulate the potential of this gap in its own interest, 'because the gap itself has the possibility of an alternative order, and alternative society, and an alternative power relation' (1996, p.44). I have attempted to begin to outline the 'discursive gap' or the 'contours of invisibility' in this paper and to think of some of the implications for curriculum.

Notes

¹ It is perhaps interesting to explore the relation between the concept of ‘invisible landscapes’ and that of the ‘hidden curriculum’, which has been deployed in discussions of pedagogy. ‘Invisible landscapes’ refers to certain discursive practices constrained by dominant discursive spaces in the curriculum, whereas the term ‘hidden curriculum’ (Seaton 2002) is used to refer to the entire socialisation process of schooling, where students learn values and behaviours through the experience of being in school, not just from what is explicitly taught. In both cases, the curriculum determines what students can and cannot experience, and the ways in which they can and cannot act. However, each concept offers a slightly different point of focus. The concept of ‘invisible landscapes’ focuses on the students’ resources, on their discourses and constructions of reality, whereas the concept of ‘hidden curriculum’ focuses more on the curriculum, on the forms of socialisation implicated in schooling.

² When quoting from students’ writing or interviews, I have not altered their grammar and spelling and have not used their real names.

³ The RDP was a social and political policy developed in 1994 by the elected African National Congress government with the aim of addressing inequities in South African society through sustainable development.

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Biographical note

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References

Archer, A., 2004. Access to academic practices in an engineering curriculum: drawing on students’ representational resources through a multimodal pedagogy. Unpublished PhD thesis. University of Cape Town.

Archer, A., 2006. A multimodal approach to academic ‘literacies’: problematizing the visual/verbal divide. *Language and Education*, 20 (6), 449 – 462.

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- Archer, A., 2007. 'No goats in the mother city': Using Symbolic Objects to help students talk about diversity and change. *English in Education*, 41 (1), 7 – 20.
- Bakhtin, M., 1981. Discourse in the novel. In: M. Holquist, ed. and trans. *The Dialogic Imagination. Four Essays by M. Bakhtin*. Austin: University of Texas Press, 259 - 422.
- Bernstein, B., 1996. *Pedagogy, Symbolic Control and Identity. Theory, Research, Critique*. London: Taylor and Francis.
- Douglas, M., 1966. *Purity and Danger: An Analysis of Concepts of Pollution and Taboo*. London: Routledge and Kegan Paul.
- Douglas, M., 1970. *Witchcraft. Confessions and accusations*. London: Tavistock Publications.
- Fabian, J. 1983. *Time and the Other: how anthropology makes its object*. New York: Columbia University Press.
- Fairclough, N., 1992. *Discourse and Social Change*. Cambridge: Polity Press.
- Freeman, M., 1998. Mythical time, historical time, and the narrative fabric of the self. *Narrative Inquiry*, 8 (1), 27 – 50.
- Freeman, M. and Brockmeier, J., 2001. Narrative integrity. Autobiographical identity and the meaning of the "good life". In: J. Brockmeier and D. Carbaugh, eds. *Narrative and Identity. Studies in Autobiography, Self and Culture*. Amsterdam and Philadelphia: John Benjamins Publishing Company, 75 – 99.
- Gee, J.P., 1996. *Social Linguistics and Literacies: Ideology in Discourses*. Second edition. London: Falmer Press.
- Halliday, M.A.K., 1978. *Language as Social Semiotic. The social interpretation of language and meaning*. London: Arnold.
- Head, L., 2000. *Cultural Landscapes and Environmental Change*. London: Arnold.
- Horak, E., 2003. A study of the thinking styles and academic performance of civil engineering students. *For Engineering Education*, 7 (1), 4 – 7.
- Kress, G., 2000. Multimodality. In: B. Cope and M. Kalantzis, eds. *Multiliteracies. Literacy Learning and the Design of Social Futures*. London and New York: Routledge, 182 – 202.
- Mayer, P., 1954. *Witches*. Inaugural lecture. Grahamstown, Rhodes University.
- Otto, S., 2005. Nostalgic for what? The epidemic of images of the mid 20th century classroom in American media culture and what it means. *Discourse: Studies in the cultural politics of education*, 26 (4), 459 – 475.

'Rural Development Framework', 1997. Rural Development Task Team (RDP) and the Department of Land Affairs [online]. Available from: <http://www.polity.organsisation.za/govdocs/rdp/rdevframe.html> [Accessed 10 June 2000].

Seaton, A., 2002. Reforming the hidden curriculum: the key abilities model and four curricular forms. *Curriculum Perspectives*, 22 (1), 9 – 15.

Sharp, J., 1988. Ethnic group and nation: The apartheid vision in South Africa. In: E. Boonzaier and J. Sharp, eds. *South African Keywords. The Uses and Abuses of Political Concepts*. Cape Town and Johannesburg: David Philip, 79 – 99.

Sontag, S., 1979. *On photography*. Harmondsworth: Penguin.

Stein, P., 2008. *Multimodal pedagogies in diverse classrooms: representation, rights and resources*. London and New York: Routledge.

Stewart, S., 1993. *On Longing. Narratives of the Miniature, the Gigantic, the Souvenir, the Collection*. Durham and London: Duke University Press.

Wulf, W.A., 2004. Some thoughts on Engineering as a Humanistic Discipline. *International Journal of Engineering Education*, 20 (3), 313 – 314.