Multiple environments: South Indian children's environmental subjectivities in formation

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ABSTRACT

This article explores the formation of South Indian children's (11–15 years old) environmental subjectivities based on five months of qualitative fieldwork with children in their school and non-school lives. By doing so, this paper aims to widen the scope of the existing literature on children's environmental subjectivities, which so far focused on separate aspects of children's lives such as environmental education, social relations or children's life courses. To do so, I use [Bourdieu, P. 1990. *The Logic of Practice*. Cambridge, UK: Polity Press] concepts of field, habitus and cultural capital along with a non-teleological notion of environmental subjectivity and insights from wider geographical literature on the formation of subjectivities. The paper shows how children's environmental subjectivities are constituted by and partially constitute the material environments and fields in which children live, their cultural capital and habitus, their movements through their life course and their environments and a wide range of practices through which children experience their environments.

Introduction

The interest in children's environmental subjectivities has been prominent for at least the last 15 years (Jickling and Wals 2008; Frantz and Mayer 2014). A large part of the literature on the formation of young people's environmental subjectivities in different parts of the world focuses on environmental education (EE) (e.g. Ardoin, Clark, and Kelsey 2013; Smyth 2006; Pande 2001; Jinliang et al. 2004; Ridgers, Knowles, and Sayers 2012). Work on the formation of environmental subjectivities through EE largely takes a normative stance, arguing that children's environmental subjectivities need to be improved through EE (Pande 2001; Jinliang et al. 2004; Smyth 2006; Ridgers, Knowles, and Sayers 2012; Bartos 2013). However, an important part of children's subjectivities is formed outside education programmes (e.g. Matthews 1995; Malone and Tranter 2005; Campbell, Skovdal, and Campbell 2013). This process may also be mediated by other aspects of children's lives, such as concerns with safety (Adams and Savahl 2013) and relationships with friends and family (Bartos 2013), modernization (Kahn and Kellert 2002) and a range of socio-cultural factors (Linzmayer and Halpenny 2014).

Based on these insights from literature that spans across many parts of the world, I investigated how south Indian children's environmental subjectivities were formed by studying their day-to-day engagements with their environments (at home, on the way to school, through teachings in the

classroom, on occasional journeys away from home/school, etc.) in a rural town and villages around it.[1] At the same time, I also studied how these engagements related to non-environmental aspects of these children's subjectivities which arose during fieldwork (e.g. their notions on 'being modern') and how those in turn informed their environmental subjectivities.

To do so, I make use of Bourdieu's (1990) concepts of field, habitus and various forms of capital along with literature on the formation of subjectivities. After a brief discussion of these theoretical approaches and the mixed-method qualitative fieldwork used for this study, this paper consists of two main empirical sections. The first covers the field (following Bourdieu 1990), the set of structures in which children live their lives: the schools they attend, the places they visit and their homes. The second section covers how children's environmental subjectivities come about in these fields. Finally, I show how the material environments and fields in which children live, cultural capital, habitus, children's movements through their life course and their environments, a wide range of practices that create direct experience with environments, and children's environmental subjectivities all interact and co-create each other.

Theory

Agrawal's (2005) defines an environmental subjectivity as 'someone who cares about the environment', and for whom 'environment is a conceptual category that organizes some of his/her thinking and is a domain in conscious relation to which he/she performs some of his/her actions' (Agrawal 2005, 162). Drawing thereon, I argue that children's environmental subjectivities consist of three dimensions: affective and practice-based relationships, following Agrawal (2005), and children's understandings of their environments, which figure prominently in the literature on EE (e.g. Pande 2001; Jinliang et al. 2004; Ridgers, Knowles, and Sayers 2012). I also draw on Kooy and Bakker (2008) and Seth (2007), who make a plea for a notion of subjectivity that attempts to be free from teleology, particularly by aiming to stay away from the suggestion that children's environmental subjectivities would in some way be lacking or insufficient. Furthermore, I understand the term 'environment' as connoting both managed and unmanaged environments, relatively 'natural' and more human-made environments, local and global environments, and current, past and future environments.

To study the formation of children's environmental subjectivities, I draw on Bourdieu's concepts of field, various forms of capital, and, to a lesser extent, habitus. The habitus has been described as a socialized subjectivity (Bourdieu and Wacquant 1992, 126), while Bottero (2010) characterized it as a dispositional identity located in people's outward, observable activities. These dispositions are socially learned, people acquire them through the experiences of everyday life (Bourdieu 1990). Next, the field is a set of structures embedded in daily life, and can be compared to the rules and boundaries of a game. Thirdly, capital can have various guises (e.g. symbolic, cultural, economic, social) and research building on Bourdieu's work have identified new forms of capital such as participatory capital (Bourdieu 1977; Bourdieu 1986; Wood 2014). The available capital combined with a person's habitus defines the range of possibilities for an individual's practices within a particular field in a rather structural way (Mahar, Harker, and Wilkers 1990). However, work inspired by Bourdieu suggests that one's available capital does not only inform practice, but that capital can also be created through practice. For example, Weller (2006) describes how teenage skaters create forms of social capital that are distinct from the kinds of social capital that adults tend to approve of, and use this teenage-social capital to change their own environment: the fields in which they live.

My conceptualization of environmental subjectivity does not only cover practical engagement with environments, but is also about thinking, consciousness and sense of self: issues that have long been thought of as being positioned somewhere deep inside ourselves (McDowell and Sharp 1999; Longhurst 2003; Probyn 2003). According to Bourdieu (1990), one's habitus informs one's (inner) subjectivity as well as one's practices. Indeed, Wood's (2014) work shows how children's practical engagements with as well as understandings of citizenship participation both result from

the various capitals those children's hold and the particular social field of their school communities. Ergler, Kearns, and Witten (2013) interestingly combine the concept of affordance (following Gibson 1979 in Ergler, Kearns, and Witten 2013) with Bourdieu's concepts to show how the locally consti-tuted anticipated benefits and meanings of a particular activity like outdoor play combined with a specific habitus result in a particular kind of practice, such as different forms of and amounts of out-door play. This shows that the emotional-mental processes one may consider to be part of one's sub-jectivity do not only come about through practice or along with practice, they also inform practice.

Literature that is specifically focused on the formation of subjectivities takes this process as being much more emergent and fluid than Bourdieu's (1990) work on habitus, field and capital. This paper brings this emergent perspective to bear on Bourdieu's concepts to come to a thicker understanding of how not only subjectivities, but also habitus, capital and field interact. Nightingale (2011) posits that the production of social difference, identity and subjectivity happens through everyday, see-mingly mundane, spatial and ongoing practices. For example, how a person moves in relation to physical objects such as water, the hearth of the home and religious icons results in different kinds of subjectivities such as women considering themselves polluted while menstruating. Adding a further dimension to understanding subjectivity-formation, Bartos (2013) shows that social relations, in particular friendships, are crucial in the development of children's environmental sub-jectivities. She argues that these social relations matter as much or perhaps more than spending time outdoors.

Geographical work on subjectivities suggests that they constitute and are constituted by time and space (Probyn 2003). For example, in Dyson's (2015) work, children's movements through the Indian Himalaya's while herding livestock and through their life courses both play a role in the for-mation of children's environmental subjectivities. Practices which result from those subjectivities (manipulating a water-supply pipe to create a huge shower to play, or staying in plain sight to avoid being stigmatized as 'bad girl') amend or reinforce particular spaces and life courses. Night-ingale (2003) shows that people's environments cannot be considered as a passive background against which people live, arguing that those material environments play an active role, while Ingold (2000) stresses the importance of specifically the ecological context in which people live. I use these observations to enrich Bourdieu's (1990) notion of the field as being a set of rules and boundaries of the game. Environments may do a lot more than setting rules and I will pay particular attention to role of time and material space in the formation of their subjectivities.

Methodology

This research primarily draws on mixed-methods qualitative fieldwork carried out between August 2010 and January 2011 in a rural town called Tiruvannamalai, in the state of Tamil Nadu. The find-ings have been enriched with and triangulated by a number of follow-up visits to Tiruvannamalai up to the end of 2015, as well as visits to various schools and homes in Hassan district, Karnataka state.

In 2010–2011, fieldwork was carried out with 11–15 year old children from three schools, namely a Tamil-medium village-based government school (Anapoondi Government School, or Anapoondi School), a middle-class English-medium private school outside town (Chela Higher Secondary Matriculation School, or Chela School) and a town-based low-quality English-medium private school (Infant Jesus Matriculation School). These schools were selected in order to maximize student diversity: rich and poor as well as Tamil-educated and English-educated.

The qualitative methods consisted of classroom observations, weekly discussion sessions with 19 children in groups of two or three, interviews with teachers, children writing weekly diaries on a range of pre-assigned topics, a creativity (writing and drawing) camp, home visits, and living with the family of a girl named Chanika and aged 13. She studied at a school that was comparable to Infant Jesus Matriculation School.

Coming from the Netherlands, my observations are likely to differ from those of a person living in Tiruvannamalai itself because of our past experiences. For example, I was raised in a place where

throwing waste on the streets in public is taboo, and where the indoor experience of the home is almost unchanging regardless of the weather outside. To enrich my vision, I regularly discussed my observations with my research assistant and an environmental activist in Tiruvannamalai, and with an academic who lived in the city of Chennai – but of course this paper presents only one of many versions of understanding children's environmental subjectivities in Tiruvannamalai.

Tiruvannamalai and Hassan are agriculture-based towns with around 130,000–150,000 inhabitants, representing an interesting space where urban and rural life overlap and interact (Registrar General & Census Commissioner 2001). Tiruvannamalai and surrounding villages are located on largely flat agricultural land, and there are no large forests or otherwise sparsely populated areas.

The 'field' in which secondary school children in South India live

This section portrays the field in which children live, and of which they form a part. This means that rules and boundaries of the game (following Bourdieu 1990) as well as the material environments (following Nightingale 2003) will be described. In addition, I will show how these fields are potential sources of capital, particularly in the case of education. This largely descriptive section sets the scene for the next section, which focuses on the formation of students' environmental subjectivities in interaction with the elements described in the current section.

School

The material environments of the schools in Tiruvannamalai were different in many ways. At Anapoondi School, children came to school on foot or by bicycle. The grounds were largely free from litter: a few children had the task to collect litter twice a day. There were taps with ample water supply but there was no clean drinking water. When the main fieldwork was carried out, children used the surrounding fields to urinate, although they had access to toilets a year later. There was no science laboratory or library, and the eight computers that had been supplied by the government were not used for teaching purposes. I observed similar circumstances in government schools in Hassan district.

At Chela School, most children came to school by school bus. Some parents dropped off their children by motorcycle. The school employed two or three cleaners, though there was a lot of litter on the school premises outside the building. The toilets were clean, but there was no safe drinking water. Instead, children bring water from home. The children used notebooks with eco-friendly paper of much higher quality than the paper commonly used by the government school children. The computer laboratory was in use, but the science laboratory served as a classroom for Hindi-lessons. Science teachers said they needed more time to prepare students for their exams and did not use the laboratory. The library was used mostly by the chairman during lunch and as a representative reception room for important guests.

Textbooks

As has been shown by Seth (2007), Basu (2010) and Pathak (2009), textbooks form a core part of the English education system and have had major impacts on the formation of (modern) subjects in India. The texts used in the classes I attended were dense, to-the-point and set up in such a way that they were conducive to learning its contents by heart in preparation for examinations: each chapter contained a list of questions that are used in examinations, and the 'correct' answer to those questions could be found by selecting the right sentence or paragraph from the chapter's text. The 'EE' curriculum consisted of a wide range of topics. These included for example personal hygiene and health as well as a few close-by problems, such as the non-degradability of ubiquitous plastic waste, and many global environmental problems. The textbook's approach to environmental problems and their solutions was generally utilitarian, stressing the importance of development and modernity. Figure 1 contains a textbook abstract that exemplifies this. Teachers at Anapoondi School
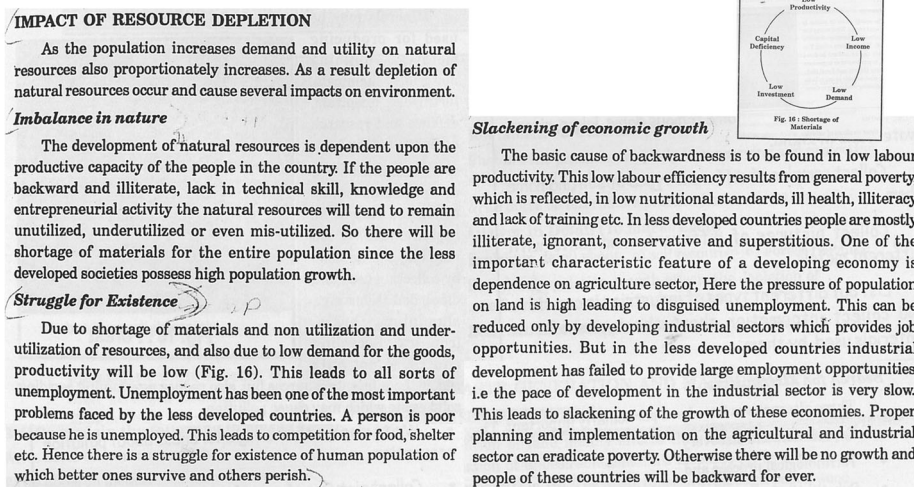
IMPACT OF RESOURCE DEPLETION

As the population increases demand and utility on natural resources also proportionately increases. As a result depletion of natural resources occur and cause several impacts on environment.

Imbalance in nature

The development of natural resources is dependent upon the productive capacity of the people in the country. If the people are backward and illiterate, lack in technical skill, knowledge and entrepreneurial activity the natural resources will tend to remain unutilized, underutilized or even mis-utilized. So there will be shortage of materials for the entire population since the less developed societies possess high population growth.

Struggle for Existence

Due to shortage of materials and non utilization and under-utilization of resources, and also due to low demand for the goods, productivity will be low (Fig. 16). This leads to all sorts of unemployment. Unemployment has been one of the most important problems faced by the less developed countries. A person is poor because he is unemployed. This leads to competition for food, shelter etc. Hence there is a struggle for existence of human population of which better ones survive and others perish.

Slackening of economic growth

The basic cause of backwardness is to be found in low labour productivity. This low labour efficiency results from general poverty, which is reflected, in low nutritional standards, ill health, illiteracy and lack of training etc. In less developed countries people are mostly illiterate, ignorant, conservative and superstitious. One of the important characteristic feature of a developing economy is dependence on agriculture sector, Here the pressure of population on land is high leading to disguised unemployment. This can be reduced only by developing industrial sectors which provides job opportunities. But in the less developed countries industrial development has failed to provide large employment opportunities i.e the pace of development in the industrial sector is very slow. This leads to slackening of the growth of these economies. Proper planning and implementation on the agricultural and industrial sector can eradicate poverty. Otherwise there will be no growth and people of these countries will be backward for ever.

Figure 1. pp. 27–29 in 'Environmental Science' for IX standard, published by the Tamil Nadu state press.

especially discussed the sections on hygiene, health and local environmental problems with their students to 'improve' them.

The EE curriculum also contained material on becoming a successful person and having a good appearance. Taking care of one's personal health and hygiene constituted an important rule of the game (see Bourdieu's (1990) field), and children's belief that they would become 'successful' by doing so elucidates part of children's movement through their life course (Dyson 2015). Together, this contributes towards creating a specifically successful and environmental subjectivity through this form of education.

Teaching practices

On the 11th of October 2010, the IX standard science teacher at Anapoondi School taught the general anatomy of flowers. He discussed the various functions of flowers and used a real flower to show the flower's parts. Children asked many questions, and the next biology classes were devoted to learning the textbook on this topic by heart. Three days earlier, I had attended a class on the same topic at Chela School. The teacher carefully followed the book: a child read a paragraph aloud, the teacher paraphrased it in Tamil and another child read the next paragraph. Fully focused on identifying the right answers to the questions in the textbooks, children rarely asked questions about the subject matter. Unlike the teachers at Chela School, teachers at the much cheaper English-medium Infant Jesus Matriculation School had a limited command of the English language. Yet the rules stipulated that had to use English teaching materials, so their explanations of the English text were not always correct.

These observations indicate that the rules of the game (following Bourdieu 1990) in these schools were such that the content of education in children's lives was made subordinate to the instrumental value of education, namely passing (preferably English-medium) examinations, in various ways. Textbooks were set up to be conducive to learning its contents by heart; teachers, especially in the private school, organized their classes around making sure that children knew exactly what to write in examinations; and the spatial practice of using the library as a prestigious reception hall rather than for teaching purposes strengthens these observations (Nightingale 2011). Indeed, in the context of widespread poverty as well as high competition for college placements and jobs, children and teachers expressed that achieving good grades at exams was of utmost importance. This was particularly the case at Chela School, where active parental support and high school fees

contribute to the pressure on students to pass their exams. Obtaining diplomas and certificates thus became cultural capital that can help one to obtain particular jobs, social status or a husband or wife (Bourdieu 1990; Mahar, Harker, and Wilkers 1990).[2]

Life at home

The poorest government school children lived in houses built out of coconut leaves while most lived in small concrete houses. Although rain was a reason to rejoice for all as it is scarce and necessary for crops to grow, most of these homes leaked during the rainy season and excessive rains could cause damage to agricultural crops. Such homes had no connection to the water grid let alone water purification facilities for drinking water. Chanika described herself as lucky because she could drink water from a well which her grandfather dug many decades ago and which she considered to be clean. Due to intermittent and insufficient water supply, children attending Anapoondi School and living in villages frequently witnessed queues and fights for water. The majority of these children had no access to a toilet at home either. Instead, they used a nearby degraded forest that is also their source of firewood and animal fodder. When I visited the village in which most children attending Anapoondi School lived in 2015, people complained that using the nearby forest for firewood, fodder and toilet purposes had become very difficult because the government had dug a trench between the village and the forest. These children also had a number of chores at home. For example, they gathered firewood and fodder, washed clothes or took care of a cow. Heavy rain or severe drought meant that children had to do extra work, such as clearing away large amounts of mud in front of their homes.

Children from Chela School lived in very different material environments, and lived by different rules (following Bourdieu 1990; Nightingale 2003). Their homes were largely rain-proof. Gas was used for cooking and toilets were a self-evident part of the house. Water was supplied directly to the house, and a water filtering system was used for safe drinking water which children also carried with them to school. Children in these families had much fewer chores at home and parents said they preferred their children to spend their time on homework. Unlike their counterparts attending Anapoondi School, they had friends and relatives who had visited nature reserves or hill stations, or in some cases they had been able to visit such places themselves. Children from both schools enjoyed watching movies and songs on television which depicted hills, mountains, lakes, etc., as romantic backgrounds to love stories.

Lastly, plants, insects and animals in children's direct surroundings played various roles in children's lives. Herbal medicines such as eucalyptus, neem and thulasi (holy basil), gathered around the home or in a local forest, were widely used to cure simple diseases such as cough and cold. Furthermore, monkeys were ubiquitous and their bites are dangerous. Parents taught children to stay away from these animals as much as possible, and to avoid attracting their curiosity by carrying food. There were poisonous snakes in the area as well, which sometimes visited children's homes. Parents were highly protective of their children in areas that are known to be inhabited by snakes, and generally considered forests as unsafe places for their children even though many children who live in houses without toilets had to go there for defecation and to gather firewood and fodder.

In the next session, I will show how the diverse material environments (Ingold 2000; Nightingale 2003) and fields (Bourdieu 1990) described in this section relate to the formation of children's environmental subjectivities.

Environmental subjects in formation

This section presents and discusses the formation of children's environmental subjectivities, following the three dimensions of children's environmental subjectivities proposed in the theory section: affective relationships with their environments, practical engagement and understandings of and knowledge about their environments. I end with a discussion on the way these environmental

subjectivities relate to aspirations towards modernity and the role of (environmental) education as a source of cultural capital.

Children's affective relationships with their environments

Regardless of their backgrounds, children distinguished between two kinds of environments: day-to-day environments consisting of their house and garden or farm fields, small local forests, school, their neighbourhood or village and the entire town Tiruvannamalai, and environments which they could not access or which were not part of their routines such as hilly areas, rain forests and natural reserves.

Children described the latter as beautiful places where calmness could be found and where the air was fresh, inspired by the images on television, stories from relatives who had visited those places and their EE classes. They all dreamed about visiting these places, which they felt they could do if they managed to become successful. The physical distance between those places and Tiruvannamalai limited the accessibility and increased their elitist associations (Nightingale 2003). The understanding of 'successful' and particularly the achievability thereof differed among children. Those studying at Chela School expected they would be able to visit such places sometime during their life. For example, they had older relatives in college going on trips to hill stations, illustrating how children's life courses played an important role in shaping children's relationships to distant, natural environments (Dyson 2015). Indeed, children from Anapoondi School had a very different internalization of the probability to access these places, or habitus (Reay 1995; Bottero 2010): they felt that these places would only accessible to them if they had money, had rich friends or got a scholarship to attend college which meant being able to join cheaper group-trips. This combination of connotations with beauty, health, being successful and the money and time that one needs to visit those natural environments rendered them exclusive, elitist and rather inaccessible.

The kinds of environments that were considered exclusive, elitist and rather inaccessible differed between Chela School and Anapoondi School. For example, when Chanika and I went on a 5-hour bus journey, she continuously looked out of the window. She often pointed at trees, rocky landscapes and animals, urging me to do the same instead of reading a book. The last time she had been outside Tiruvannamalai district had been many years ago, and she was very curious to see what the environment elsewhere looked like. In contrast, Priya (15) from Chela School had spent part of her youth about 2000 kilometres away from Tiruvannamalai, near Calcutta, and the father of her classmate Kavitha (15) often went to Delhi, sometimes even by aeroplane.

The positive, almost romantic attitude that children had towards distant 'nature' also applied to some of children's day-to-day surroundings. When I asked children for their opinions about different buildings and places, they almost always commented primarily on the trees and greenery in the area and spoke much less about the non-living aspects of the place, such as buildings. Some particularly loved the one or two trees near their home, which they said they liked to climb, eat fruit from or sit under for shade. Others preferred smaller bushes with flowers, which they collected to decorate their hair, their home altars or the house. All children appreciated and were able to identify a few medicinal plants growing around the home, in fields or small forests. The many uses of their physical environments contributed to an environmental subjectivity that strongly valued that environment. The family structure or field in which the children lived, which prescribed that it was desirable for girls to wear flowers in their hair and which had, particularly in the case of government school children, little access to fruit from the market, also contributed to this appreciation of local environments.

Richer children living in the town had mostly romantic ideas on living in a village. They celebrated the village's clean air, songs of birds, trees and the 'cool breeze', describing these as desirable, in contrast to the material reality of town with its noise, smell and dirt lining the streets which they considered uncivilized. Yet they also said they would rather live in towns or cities because of the excitement of shops, the vicinity of the 'big temple' and job opportunities: ultimately and

understandably, aspirations for a modern life that fit their understanding of being successful won from their wishes to get away from what they considered to be the uncivilized aspects of living in a town. Children from Anapoondi School were not so enthusiastic about village life. Like their textbooks, they expressed concern with the lack of good health care in the area. They also complained about the presence of drunken men in the evening or about fights to access water in the morning. In this case, the material environments in which children lived, following Nightingale (2003) played a crucial role in the formation of these children's affective relations to these spaces.

When I asked these children how they put their lessons from EE classes in practice, they keenly told me that they washed themselves every day, presenting this as a token of being modern and preparing to become a successful individual. They cared much less, on the other hand, about their textbook teachings on aspects of EE that were simply out of reach, such as using toilets or drinking purified water. Children from Chela School enthusiastically discussed the type of water purification system they used at home, associating those systems with taking good care of one's own health and being progressive, modern and hygienic. Similarly, those with 'Western toilets'[3] at home proudly presented themselves as being modern because they had advanced bathroom facilities. The spaces in which children lived and in which they went to school did not only contribute directly towards the formation of specific subjectivities as suggested by Probyn (2003) and Nightingale (2003), but also towards the creation of different sets of rules (fields) and different sets of dispositions (habitus). This then resulted in different practices, such as drinking (or not drinking) clean water, as well as different internal subjectivities, such as not caring about the lack of toilets, or considering the Western toilet in their home as a token of their modern, advanced identity.

Children's practical engagement with 'waste'

In this section, I will explore children's engagements with their environments in practice through the example of 'waste'. Children particularly felt that their pride of their country was compromised by the presence of too much 'waste' in public spaces. Exemplary for many of my discussions with children from various backgrounds is the following excerpt from Anbini's (13) research notebook from Anapoondi School:

> Our state and country should be clean and healthy. Why? Because then nobody will speak badly about our state and our country. Only if it is healthy and looks clean, others will speak well about our state and our country. Then, our country will be good.

While this quote stresses health and clean looks, children also spoke a lot about the presence of non-biodegradable waste in their environments, about which they learnt at school that it takes many years to disappear, and they stressed the importance of using dustbins and avoiding the use of plastic bags and packagaes. When Meyyan (11) from Anapoondi School was eating a small bag of crisps during the lunchbreak, he commented:

> This bag is not good. But there is no other way to buy crisps for me. The package is already there. I think it is better if the shopkeeper puts the crisps in paper bags and sells them that way.

At the same time, it was common practice for almost all children to drop their candy and biscuit wrappings on the road while walking home or sitting in the school bus: there was a lot of waste lying everywhere along the road, there were few dustbins and having food waste or packaging on you attracted dangerously biting monkeys. In addition, like their parents, children always demanded plastic bags when they buy something at the market or a shop which they would use for a wide range of purposes at home. Plastic bags were scarce at home, and used until they fell apart. So environmentalist 'rules of the game' got overruled by another set of imperatives, informed by the materiality of carrying waste and the usefulness of plastic bags, creating practices that were at odds with the environmentalist rules of the game (Bourdieu 1990).

Children from Anapoondi School converted their concern with waste into a variety of other practical activities, such as cleaning the school grounds once or twice a day and selling recyclable waste to the 'rubbish man' in exchange for a small sum of money or eatables such as tomatoes. Children from Chela School lived in an environment where cleaning was done by parents or employed cleaners. Cleaning was not considered to be a suitable activity for these children by their parents and school managers, and the children developed a habitus that was little concerned with cleaning waste. Clearly, fields in which children live, including notions of attractive consumables (vegetables wrapped in plastic), the materiality of carrying waste and notions of appropriate behaviour for children from different backgrounds resulted in various practical engagements with waste (Bourdieu 1990). Their affective engagement with waste as an environmental issue, on the other hand, was much more informed by their teachings at school and widespread nationalism.

Children's understanding of their environments

This section discusses children's understandings of and knowledge about their close-by and far-away environments, focusing on topics children themselves were keen to talk about and topics which were covered in textbooks. Furthermore, I do not aim to evaluate the accuracy of children's understandings of their environments, but rather to present children's own perspectives.

Climate change and the greenhouse effect were discussed extensively in the school textbooks, particularly for VIII standard (when children are around 13 years old) and above. However, in 2010, the effects of climate change had not been very clearly noticeable or explicitly labelled in children's daily lives and their engagement with this topic is much less strong than with other topics that also figured in their textbooks, like waste, chemical pollution and deforestation.[4]

Chanika often said: 'everything affects all other things'. Indeed, children from villages studying at Anapoondi School actively drew connections between pieces of information that were presented to them at school. They did so highlighting how they directly faced the consequences of for example water pollution, bad rainfall and deforestation in the form of food shortages, less access to resources such as timber for cooking and extra work at home to repair the damage created by extreme rainfall. They frequently brought up these topics during the discussion sessions, for example saying:

> The size of forests in the world is decreasing. Therefore, the rainfall in our area is not good. That means that our crops do not grow properly. This is a big problem for us. Instead of forest, there are factories now. From these factories, we get pollution. If that comes in the river and on our fields, our crops will also be negatively affected and the fish will die. If we eat that fish, it is also bad for us. (Mohan, 11, Anapoondi School)

The material reality of facing the direct consequences of environmental problems is a key here to understanding children's environmental subjectivities (Ingold 2000; Nightingale 2003). For the richer children at Chela School, this home- and reality-based interest in rainfall, deforestation and water pollution is less strong. Their discussion of these problems resembles their textbooks, while they stress consequences such as crop failure far less than their government school counterparts.

Environmental subjectivities, cultural capital and 'being modern'

Understandably, children were more occupied with their own social and economic development such as securing a good job than with many of the environmental concerns discussed. Children eagerly discussed their dreams for the future, in which they would have a nice vehicle, a job at a school or company and a modern lifestyle. When I visited her in 2015, Chanika was studying mathematics. Coming from a family with little economic power, she wanted to find a good job and earn her own income. Not only her physical environment, but also her movements through the life course play an important role in the development of her environmental subjectivity (Dyson 2015).

These observations may seem to suggest that ambitions towards a modern life compromise children's environmental subjectivities, following Kahn and Kellert (2002). However, having environmental knowledge and being concerned about environmental issues such as deforestation figured

as a form of cultural capital among children: they were proud of their environmental awareness and saw it as part of their modern identity which would help them to become successful in life (Mahar, Harker, and Wilkers 1990). At the same time, they attributed other people's 'bad' environmental behaviour to a lack of knowledge and education. For example, Deeran (14) from Anapoondi School argued:

> Some people in my village cut trees. They sell them and make profit. I will never cut trees for money. I know how important trees are for our health but these people do not know, they are uneducated. That is why they make this mistake.

The relationship between environmental knowledge and being modern first of all came from education being a source of cultural capital more generally, and EE's lessons on hygiene and personal care figuring as contributors towards creating a successful personality, as discussed earlier. Additionally, particularly children at Anapoondi School felt that they knew more about issues like the connection between rainfall problems and cutting trees than their parents and others living in their village. Through the everyday practice of going to school, children created modern identities out of being aware of environmental problems (Nightingale 2011). Lastly, high-level officials on TV or at children's schools during special ceremonies would often discuss the importance of taking care of the environment, and children therefore said that they needed to know about and act upon environmental problems if they wanted to resemble these high-level officials, whom many regarded as role models. In other words, children subsumed their environmental subjectivities within their wider aspirations towards success and modernity.

Conclusion

In this paper, I studied the formation of children's environmental subjectivities in and around a rural town in south India. Existing literature on the formation is of children's environmental subjectivities focuses on children's lives either at home or at school, or on the role of, for example, socio-cultural factors or friendships (e.g. Ardoin, Clark, and Kelsey 2013; Bartos 2013; Campbell, Skovdal, and Campbell 2013; Linzmayer and Halpenny 2014 and others). In contrast, I focused on children's environmental subjectivities in relation to many aspects of their lives, including their environments at home, at school and in between. To do so, I used a combination of Bourdieu's (1977, 1986, 1990) theory of practice and geographical work on the formation of subjectivities.

With respect to children's affective relationships with their environments, this paper showed that natural environments such as hill stations figured as exclusive, elitist and rather inaccessible places that can only be visited if one manages to become successful in life. These associations were created through a combination of the field, or rules of the game, in which children lived (Bourdieu 1990) and material environments (Nightingale 2003). This included the depiction of these places as backgrounds to romantic songs on television, narratives from relatives who had been able to visit these places and the physical distance between those places and Tiruvannamalai. Children's expectations of their future life courses (following Dyson 2015) and hence their habitus, or their internalization of their probability to access those places (Reay 1995; Bottero 2010), differed for children from Anapoondi School and Chela School. Those studying at the latter school expected they would be able to visit such places or had sometimes already been able to do so, while children from Anapoondi School largely dreamt about visiting these places and most students felt it was likely that they would never be able to do so.

With regard to children's practical engagements with their environments, particularly with waste, I showed how environmentalist 'rules of the game' (following Bourdieu 1990), which most children internalized and discussed as something they considered important, got overruled by another set of imperatives. These consisted of the material implications (following Nightingale 2003, 2011) of carrying waste rather than throwing it on the streets and the attractiveness of plastic packages, creating practices that were at odds with those environmentalist rules of the game, and re-created these spaces

as 'full of waste'. At the same time, notions of appropriate behaviour with regard to cleaning waste – the field – differed for children from Chela School and Anapoondi School, resulting in different practical engagements with waste at the school grounds or around the house.

Lastly, the material reality of facing the direct consequences of environmental problems played a key role in children's understandings of and knowledge about their environments (Ingold 2000; Nightingale 2003). Children from Anapoondi School had particularly thorough knowledge about the relationships between pollution, deforestation and changes in weather patterns, inspired by what they learnt at school and what they experienced at home as a consequence of pollution, deforestation and changing weather patterns.

Overall, children's environmental subjectivities were subsumed by their aspirations towards a modern, successful life. At the same time, their environmental subjectivities were closely related to and informed by their understandings of modernity and success. Having environmental knowledge figured as a symbol of being educated and as a form of cultural capital (Bourdieu 1977; Bourdieu 1986). Of course, the modern identities that children understandably seek to cultivate, and of which their environmental subjectivities formed a part, also come with working towards a rich, high-status lifestyle that will result in a larger environmental footprint. This complex relationship between environmental concerns and cultivating modern identities across the globe warrants further study and shows the importance of studying not only the formation of children's environmental subjectivities but their subjectivities as a whole: their sense of self in relation to environmental issues as well as in relation to other themes such as education and modernity (Seth 2007).

This paper has shown that children's environmental subjectivities in this part of south India cannot be described as 'environmentalism of the poor' (Guha 1997; Martinez-Alier 2002). While children from Anapoondi School were clearly concerned with direct access to natural resources and the environment's role as a material base for their livelihoods, they also considered these concerns as a token of their educated identities. In addition, they were concerned with issues such as the ubiquitous presence of waste, which was something that did not threaten their environments as a source for their livelihoods, and they showed a lot of interest in visiting natural areas about which they had romantic ideas.

To conclude, children's environmental subjectivities arise through a complex interplay between various aspects of their lives. Mahar, Harker, and Wilkers (1990), following Bourdieu (1977, 1986, 1990), suggest that the available capital plus a person's habitus defines the possibilities for practice within a particular field. However, in this paper, a wide set of elements all interact, co-create each other and keep on doing so through an emergent, fluid process: the material environments in which children live (following Ingold 2000; Nightingale 2003), the rules of the game, or field, cultural capital, habitus (following Bourdieu 1977; Bourdieu 1986; Bourdieu 1990), children's movements through their life course and their environments (following Probyn 2003; Dyson 2015), a range of practices that create direct experience with environments and children's environmental subjectivities. Building on these insights, future work could zoom in on the many aspects of children's environmental subjectivities that this paper touched upon and thicken the understanding of how each of these aspects come about. This would be an interesting starting point for improving the EE curriculum in a way that meets students' needs and fits their outlook on life, instead of prioritizing global, often Western-based, environmental problems.

Notes

1. Martinez-Alier (2002) and Guha (1997) suggest that there is a specific 'environmentalism of the poor' in the global South, characterized by a focus on resource equity and a material interest in the environment as a base for livelihoods, in reaction to Inglehart's (1990) post-materialist environmentalism that may characterize environmentalism in the global North. I will evaluate the extent to which south Indian children's environmental subjectivities could indeed be considered as such.
2. Jeffrey, Jeffery, and Jeffery (2005) made similar observations on the role of education as a source of cultural capital in India, studying how young un(der)employed young men cope when their education fails to be the source of cultural and particularly financial capital as they expected.

3. In India, western toilets are designed for sitting and Indian toilets for squatting.
4. During my later visits to both Tiruvannamalai and Hassan district, children spoke frequently about the ways in which the weather was changing, attributing this to rising CO_2 levels, the greenhouse effect, the hole in the ozone layer and increasing pollution.

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References

Adams, S., and S. Savahl. 2013. Children's Perceptions of the Natural Environment: A South African perspective. *Childrens Geographies* 13 (2): 196–211.

Agrawal, Arun. 2005. "Environmentality: Community, Intimate Government and the Making of Environmental Subjects in Kumaon, India." *Current Anthropology* 46 (2): 161–190.

Ardoin, Nicole, Clark, Charlotte, & Kelsey, Elin 2013. An Exploration of Future Trends in Environmental Education Research. *Environmental Education Research* 19 (4): 499–520.

Bartos, A. E. 2013. "Friendship and Environmental Politics in Childhood." *Space and Polity* 17 (1): 17–32.

Basu, A. 2010. "The Dialectics of Resistance: Colonial Geography, Bengali Literati and the Racial Mapping of Indian Identity." *Modern Asian Studies* 44 (1): 53–79.

Bottero, Wendy. 2010. "Intersubjectivity and Bourdieusian Approaches to 'Identity.'"*Cultural Sociology* 4 (1): 3–22.

Bourdieu, P. 1977. *Outline of a Theory of Practice.* Cambridge, UK: University Press Cambridge.

Bourdieu, P. 1990. *The Logic of Practice.* Cambridge, UK: Polity Press.

Bourdieu, P. 1986. "The Forms of Capital." In *Handbook of Theory and Research for the Sociology of Education*, edited by J. Richardson, 241–258. New York: Greenwood.

Bourdieu, Pierre, and Loïc J. D. Wacquant. 1992. *An Invitation to Reflexive Sociology*. Chicago, IL: The University of Chicago Press.

Campbell, Eleanor, Morten Skovdal, and Catherine Campbell. 2013. "Ethiopian Students' Relationship with their Environment: Implications for Environmental and Climate Adaptation Programmes." *Children's Geographies* 11 (4): 436–460.

Dyson, Jane. 2015. "Life on the Hoof: Gender, Youth, and the Environment in the Indian Himalayas." *Journal of the Royal Anthropological Institute* 21: 49–65.

Ergler, Christina R., Robin A. Kearns, and Karen Witten. 2013. "Seasonal and Locational Variations in Children's Play: Implications for Wellbeing." *Social Science & Medicine* 91: 178–185.

Frantz, Cynthia McPherson, and F. Stephan Mayer. 2014. "The Importance of Connection to Nature in Assessing Environmental Education Programs." *Studies in Educational Evaluation* 41: 85–89.

Gibson, J. J. 1979. *The Ecological Approach to Visual Perception.* Boston, MA: Houghton Mifflin.

Guha, Ramachandra 1997. The Environmentalism of the Poor. In R.G. Fox, O. Starn (Eds.) *Between Resistance and Revolution: Cultural Politics and Social Protest*, 17–38. New Brunswick: Rutgers University Press.

Inglehart, R. 1990. *Culture Shift in Advanced Industrial Society*. Princeton, NJ: Princeton University Press.

Ingold, T. 2000. *The Perception of the Environment: Essays in Livelihood, Dwelling and Skill.* London: Routledge.

Jeffrey, C., P. Jeffery, and R. Jeffery. 2005. "When Schooling Fails: Young Men, Education and Low-caste Politics in Rural North India." *Contributions to Indian Sociology* 39 (1): 1–38.

Jickling, B., and A. E. J. Wals. 2008. "Globalization and Environmental Education: Looking Beyond Sustainable Development." *Journal of Curriculum Studies* 40 (1): 1–21.

Jinliang, W., H. Yunyan, L. Ya, H. Xiang, W. Xiafei, and J. Yuanmei. 2004. "An Analysis of Environmental Awareness and Environmental Education for Primary School and High School Children in Kunming." *Chinese Education and Society* 37 (4): 24–31.

Kahn, P. H., and S. R. Kellert, eds. 2002. *Children and Nature: Psychological, Sociocultural, and Evolutionary Investigations*. Cambridge: MIT Press.

Kooy, M., and K. Bakker. 2008. "Technologies of Government: Constituting Subjectivities, Spaces, and Infrastructures in Colonial and Contemporary Jakarta." *International Journal of Urban and Regional Research* 32 (2): 375–391.

Linzmayer, Cara D., and Elizabeth A. Halpenny. 2014. "'I Might Know When I'm an Adult': Making Sense of Children's Relationships with Nature." *Children's Geographies* 12 (4): 412–428.

Longhurst, Robyn. 2003. "Section 5: Placing Subjectivities. Introduction: Subjectivities, Spaces and Places." In *Handbook of Cultural Geography*, edited by Kay Anderson, Mona Domosh, Steve Pile, and Nigel Thrift, 283–289. London: Sage.

Mahar, C., Harker, R., & Wilkers, C. 1990. "Chapter 1: The Basic Theoretical Position." In *An Introduction to the Work of Pierre Bourdieu*, edited by C. Mahar and R. Harker, 1–25. London: Macmillan.

Malone, K., and P. Tranter. 2005. "'Hanging Out in the Schoolground': A Reflexive Look at Researching Children's Environmental Learning." *Canadian Journal of Environmental Education* 10: 212–224.

Martinez-Alier, J. 2002. *The Environmentalism of the Poor: A Study of Ecological Conflicts and Valuation*. Cheltenham: Edward Elgar.

Matthews, H. 1995. "Culture, Environmental Experience and Environmental Awareness: Making Sense of Young Kenyan Children's Views of Place." *The Geographical Journal* 161 (3): 285–295.

McDowell, Linda, and J. Sharp, eds. 1999. *A Feminist Glossary of Human Geography*. London: Arnold.

Nightingale, Andrea. 2003. "Nature-Society and Development: Social, Cultural and Ecological Change in Nepal." *Geoforum* 34: 525–540.

Nightingale, Andrea. 2011. "Bounding Difference: Intersectionality and the Material Production of Gender, Caste, Class and Environment in Nepal." *Geoforum* 42: 153–162.

Pande, A. 2001. "Environmental Education in Rural Central Himalayan Schools." *The Journal of Environmental Education* 32 (3): 47–53.

Pathak, A. 2009. *Recalling the Forgotten: Education and Moral Quest*. Delhi: Aakar Books.

Probyn, Elspeth. 2003. "The Spatial Imperative of Subjectivity." In *Handbook of Cultural Geography*, edited by Kay Anderson, Mona Domosh, Steve Pile, and Nigel Thrift, 290–299. London: Sage.

Reay, D. 1995. "'They Employ Cleaners to Do That': Habitus in the Primary Classroom." *British Journal of Sociology of Education* 16 (3): 353–371.

Registrar General & Census Commissioner. 2001. "Census 2001." Accessed January 17, 2015. http://censusindia.gov.in/2011-common/censusdataonline.html.

Ridgers, N. D., Z. R. Knowles, and J. Sayers. 2012. "Encouraging Play in the Natural Environment: A Child-Focused Case Study of Forest School." *Children's Geographies* 10 (1): 49–65.

Seth, S. 2007. *Subject Lessons: The Western Education of Colonial India*. New Delhi: Oxford University Press.

Smyth, J. C. 2006. "Research and Education: A View of a Changing Scene: Reprinted from Environmental Education on Research (2005) 1 (1), pp. 3–20." *Environmental Education Research* 12 (3–4): 247–264.

Weller, Susie. 2006. "Skateboarding Alone? Making Social Capital Discourse Relevant to Teenagers' Lives." *Journal of Youth Studies* 9 (5): 557–574.

Wood, Bronwyn E. 2014. "Participatory Capital: Bourdieu and Citizenship Education in Diverse School Communities." *British Journal of Sociology of Education* 35 (4): 578–597.