

Communicating Environmental Knowledges: Young People and the Risk Society

Verity Jones

Centre For Alternative Technology, Machynlleth, Powys, SY20 9AZ, UK

In this paper I will illustrate how an increased demand for the communication of environmental knowledges in contemporary society can be understood using ideas purported by the risk society thesis. In order to deepen these connections and understandings I will discuss how trust, and by association doubt, are constructed by examining the interesting, though little explored example of young people. Drawing on empirical work at a botanical garden with over 150 young people between 6 and 12 years old I will provide insights into the use and negotiation of trust and doubt in practice.

Key Words:

Risk Society, Young People, Environmental Education, Qualitative Research, Botanical Gardens.

Introduction

The Nature of Risk

In the last thirty years there has been an increased emphasis on environmental awareness through international policy (for example the Belgrade Charter of 1975, the World Conservation Strategy of 1980 and the Global Biodiversity Strategy of 1992). Within these environmental strategies it is generally considered crucial that the public is informed about environmental issues and that environmental knowledges are communicated effectively to the public. One way of thinking about these issues is through the framework of the risk society thesis developed by Ulrich Beck and Anthony Giddens during the early 1990s. Over the past ten years this thesis has proved an influential theory within the social sciences, some even describing it as “visionary” (Adam and van Loon, 2000). The thesis, as its name suggests, orientates around society’s relationship with risk. Giddens (1999) considers there to be two types of risk. Firstly there is ‘external risk’ associated with events that happen frequently enough to be broadly predictable, for example bad harvests, floods and volcanic eruptions. Secondly there is ‘manufactured risk’: risk created by the very development of society, especially through science and technology. The risk society thesis describes this fundamental shift towards dependence on scientific and technical knowledge in western societies. Beck notes that today “manufactured uncertainty means that risk has become an inescapable part of our lives and everybody is facing unknown and barely calculable risks ... We no longer choose to take risks, we have them thrust upon us” (1998:12). These techno-scientific risks are neither temporarily nor spatially known as the potential consequences of them (such as nuclear spills, radioactive fall out, and GMO contaminations) can affect both future generations and cross national borders (Lash and Wynne 1992).

The risk society thesis has initiated broad debate in social theory (see for example Douglas 1994, Grove-White 1998, Irwin, Allan and Welsh 2000). However, in this paper I will concentrate in its framing of environmental knowledge communication and how this is practiced. In the literature pertaining to risk environmental risks are frequently singled out from other types of risk. Stephen Tindale notes, “of all the myriad of risks facing the individual at the end of the twentieth century, environmental risks are among the most pervasive, the most serious and the most feared” (1998:54). Human actions can destroy entire ecosystems, wipe out species and put a strain on resources. With such responsibility put on humans to look after the environment comes a public demand for knowledge and information about the environment. Communication has never been so important, as people insist on knowing what modes of immunisation they should have, what food is safe to eat, and so forth. This has had the effect of increasing the public’s understanding of society’s relation with the environment; an effect that has had serious consequences for the way society concerns itself with the environment and the policies that have been developed over the last few decades. This relationship is of great importance to this paper where I will engage with the risk society thesis and seek to deepen its understanding of how society works with regard to environmental knowledge communication. In particular I will pay specific attention to the interesting though little explored example of young people. In doing this I will add to a number of geographical agendas.

My interest in the communication of environmental knowledges has engaged, and developed a long tradition in Human Geography. Environmental concerns link to broader themes of landscape and place, culture and nature all of which have become integral to the Human Geography tradition and aid in the development of society’s understanding of the world (see for example Cosgrove 1984, Cosgrove and Daniels 1988, Franklin 2000, Jacks and Penrose 1993, Massey and Jess 1995). However, my interest becomes more fully developed in areas specifically concerned with communicating environmental knowledge. To this end Burgess’s work (1990) on the public’s awareness and understanding of environmental issues as communicated by the media, and Davies’ work which focuses on the interface between scientific and lay knowledges of nature as understood through natural history television programs (2000) is of particular interest. My work develops these insights and shifts focus away from media productions to consider how everyday learning experiences can contribute to the construction of environmental knowledges. This further develops Anderson (1995) and Whatmore’s (2002) work on the construction of nature and moves towards producing a more detailed understanding of the social processes involved in communicating environmental knowledges. As I have said this work primarily looks at young people’s experiences in the social network and thus adds to a growing interest in young people’s geographies.

Looking at young people as a research focus in geography, Tracy Skelton and Gill Valentine (1998) note that while there is a significant body of work on and about young people’s environments which includes studies of their competence, behaviour, attachment to place and access to space (see for example Blaut 1971, Anderson and Tindal 1972, Hart 1979, Downs 1985, Ward 1990, Katz 1991, 1993, McRobbie 1991, Aitken and Wingate 1993, Aitken 1994, Sibley 1995a, 1995b, Valentine 1996a, 1996b, 1997a,

1997b), geographers have been criticised for ignoring young people in other areas of their work. Perhaps most notably Sarah James (1990) questioned whether or not there was a place for young people in geography. She argued that more work needs to be done on the experiences of youth, making young people's actions and understandings more visible, taking seriously their position as social actors. If we are to have an understanding of how young people deal with their subjective circumstances, studies *must* foreground their agency in social action (James, Jenks and Prout 1998). It is this type of study I have attempted to undertake. From the start I have taken the young person's perspective seriously, I have investigated their circumstances and listened to their opinions. I believe that young people's lived experiences, understandings, interactions with each other and various adults, their strategies and tactics of actions must all be taken into account through all aspects of the research process. As Alan Prout puts it:

“Like all social actors children can be seen as shaped and constrained by the circumstances of their lives, they also shape them and are enabled by them. They are limited by the conditions of their social lives, but also find ways of creatively managing, negotiating and extending the possibilities.” (2000:7)

Over the last decade there have been a number of geographical studies that draw attention to young people's ability to subvert and resist the production of public space (Katz 1991, Breitbert 1995). In Skelton and Valentine's (1998) edited collection on the geographies of youth culture and Holloway and Valentine's later collection in *Children's Geographies* (2000), an assortment of work drawing together recent thinking within social, cultural and feminist studies to focus upon the complexities of youth cultures and their spatial representations has been brought more up to date. These collections have mainly highlighted young people's disconnection to the city, their lack of access to public spaces, and their actions to resist adult orientated urban space. Whilst drawing on early sociological work interested in young people as social actors, this has furthered Bunge's (1973) commitment to give young people, as a minority group, a voice in an adultist world.

Valentine, Skelton and Chambers (1998) note that geographical work regarding young people's experiences of green, open spaces and rural environments has received less attention than their urban counterparts¹ (see also Philo 1992). Geographers have paid little attention to how young people come to understand and make sense of green environments² or their environmental knowledges. Yet I would argue that such issues are of intrinsic importance to the modern environmental politic and reflect the need for research to be undertaken with young people in geography about their environmental understandings both in the rural, urban and inbetween. With this in mind I intend to discuss how young people's environmental knowledge communication practices can be considered with regard the risk society thesis, and how their practices can develop and deepen our understanding of their practices. In order to do this I will initially discuss the theoretical underpinnings of the risk society in more detail with regard to the environment. I will then place young people in the context of the environmental

education the risk society has demanded before bringing this back to specifically look at young people's place in the thesis. Highlighting the lack of empirical work on young people's practices of environmental knowledge communication I will then discuss the context for research, and the interpretation of young people's practices that ensued. Here I will concentrate on the construction of trust and doubt by young people; key processes to the risk society. Finally I will conclude this paper by discussing how the actual practices of young people need to be considered within the risk society and how insights from these practices can help evaluate communication practices both with young people and more widely.

The nature of risk society

Beck claims that "risk society begins where nature ends" (1998:10). In saying this he does not mean there is no nature left, merely that there is no nature untouched by human hand. All nature is what he terms "secondary nature" (Beck 1992). He says of this contemporary condition "whatever scientists do, measure, ask, assume, or check, they *advance* or *impair* health, economic interests, property rights, responsibilities, or jurisdictions" (Beck 1992:81). As a result there has been a change in how society concerns itself with nature. Traditionally society has had anxieties about what nature can do to it. We have been at the mercy of the elements with storms, volcanic eruptions, earthquakes, famines, droughts and so forth. More recently there has been a switch in focus to what we can do to nature, modifying it, destroying it, contaminating it. Nature is no longer considered as much a threat to us as we live in fear of what we could do to it. Herein lies the connection between the formation of risk society and the increased concern for public understanding and the acquisition of environmental knowledges. Our negotiation of risk and the resultant change in attitude to the environment has triggered us to provide policies and good practice documents for looking after the environment, demanding more communication with the public and relevant education about environmental good practice. Environmental education is an important part in this shift towards looking after the environment. The extent of this education is both global in scope and temporal in framework. Policy looks to the future aiming to provide an environment that can both sustain the population and be sustaining.

So, the risk society thesis offers a way of thinking about society's relationship with the environment through social process. Beck argues that society copes with looming environmental risks by engaging with a process of *reflexive modernisation*. Reflexive modernisation describes "the tendency in western industrial societies to continually revise most aspects of social activity, arising out of the proliferation of organisations and technologies which generate new information or knowledge" (Thrift 2000:680). Knowledge produced by the sciences, which would once have been taken as "truth", is now constantly undermined by other knowledges. While experts communicate knowledge, "people themselves become small, private alternative experts" (Beck 1992:61), collecting data and arguments and making sense of expertise for themselves.

Of fundamental importance to reflexive modernisation, and at the core of the risk society thesis is the idea that the actions and choices we make in the face of (environmental) risk

are based on the social process of trust, and by association doubt. Trust, as Giddens points out, “presupposes awareness of the circumstances of risk” (1990:31). Take for example the risk of eating beef that has been infected with “mad cow disease”. The buyer has to negotiate trust and doubt. S/he may doubt the safety of some meat and so has to place trust in the farmers who reared the cow, or the reputation of the store from which it was purchased, to avoid the risk of consuming dangerous substances. Thus the buyer tries to counter risk (and doubt) by engaging in trust. We trust the stores that provide us with beef, though we know it may be harmful. In this way security within our environment comes in the form of a balance between trust and acceptable risk as negotiated between the public and experts.

It seems that no matter what we do we are taking a risk. “Whenever someone decides what to eat, what to have for breakfast, whether to drink decaffeinated or ordinary coffee, that person takes a decision in the context of conflicting, changeable scientific and technological information” (Giddens 1998:32). The action you take may not come in any huge life changing form. However, looking at my own lifestyle choices I can see how they have, to some extent, been determined by what experts have told me is right and good. “Save energy”, so I switch off lights when I leave rooms, I only fill the kettle with as much water I need before boiling it. “Try not to add to landfills”. So I have piles of newspapers and bottles, cans and tin foil I take to the recycling bins, bags of cloths and books for charities. “Additives can be harmful” so I steer clear of E numbers and sugar alternatives in what I eat, I make an effort to buy fresh, and even better get organic produce. “Reduce harmful emissions” so I buy CFC free products and try not to use the car for journeys I could take on foot or by public transport. I do these things without even thinking about them, so embedded is the advice. While society has come to realise the temporality of scientific facts, all of us make similar decisions as to what course of action we think is best and most appropriate in light of what we know now, and what the experts have told us. Whether these actions are for the environment, for our children’s safety, or our own health, we weigh up the pros and cons and act.

In sum the risk society thesis considers the communication of environmental knowledge to be contextualised; dependent on which experts and publics are involved and what vernacular knowledges they have themselves. The public are not the passive vessels found in other models of communication such as the deficit model (see Jones 2003) but are active agents in their own right, making sense of their own knowledges and those knowledges presented to them in the light of the temporal nature of scientific facts. In this way the risk society thesis offers a way of thinking about the practice of the communication of environmental knowledges. It views the learning public as active agents in their own right and highlights trust as an important social process to communication. However, how trust is actually constructed has had little attention paid to it, especially with regard young people. Do young people trust experts in the same way as adults? How do they come to engage with trust? What processes and expertise are involved? I will discuss this interesting, though little explored issue in the remainder of this paper. Initially I will do this by commenting on the place of young people to discussions of environmental education before bringing it back to the risk society more specifically. I will then offer some empirical material which will provide insights into

how young people are entangled with trust and how these trusts are constructed and negotiated.

Young people and environmental education

Of specific relevance to this paper is young people's entanglement with environmental education. As a group they are considered integral to the development of good environmental practices for three reasons. First, young people are important because, as James notes, "children are tomorrow's adults" (1990:279). The long-term state of the environment relies on future generations taking care of it. A recent report by the Alliance of Childhood commented, "scientists consider childhood the most critical period for cultivating an affinity, appreciation, awareness, knowledge, and concern for the natural world" (Cordes & Miller 2000:49). Roger Hart claims that this may be because young people are "more receptive to change and less integrated into the existing economic system of social order" (1997:17). However, he goes on to point out that we know very little about how and why young people develop such a concern for environmental issues (1997:17). With this in mind, it has been argued that the relationships young people develop with their natural environment need to be nurtured.

Secondly young people are in the unique position of being young now. As Evans, Gill and Marchant (1996) point out, many parents were at school when environmental concerns were not regarded as such important issues, and they are therefore unable to engage in certain environmental discussions. The education young people are getting now is the result of global societies being at a point in history when many nations are reassessing their use of natural resources. Research suggests that young people often appear to be better informed on major environmental issues than their parents. This can have a direct affect on adults' actions, as young people and their environmental understandings can, in some cases influence families to develop more sustainable lifestyle choices. As Evans et. al. conclude from their studies:

"There is evidence that a programme of environmental education received by children indirectly influenced their parents in re-cycling paper, plastic, and tin-cans. More parents re-cycled these materials after the children's programme than before." (Evans, Gill & Marchant 1996:243).

This brings me on to the third reason why young people are important to environmental education issues. Young people are an obligatory audience for environmental education in schools, through their compulsory education from 5 to 16 years old. Young people of school age in the UK are privy to a revised educational strategy (commonly known as Curriculum 2000). Within this, environmental education, or Education for Sustainable Development (ESD) as it is termed, is an intrinsic, though as yet non-statutory part, of everyday school life. The British government appear to have environmental education high on their agenda, and consider the place of young people to be intrinsic to the future well being of our environment and its resources. As the Curriculum notes:

“Sustainable development is the fundamental challenge that all societies face if we are to avoid long term damage to the Earth's basic life-support systems. Young people will be the decision-makers of the future, in both their personal and professional lives. They need to learn to live in ways that increase quality of life for themselves and others without eroding the Earth's resources at a rate quicker than they can regenerate.” (National Curriculum 2000)

In order to do this pupils are now encouraged to:

“Develop their awareness, understanding, and respect for the environments in which they live, and secure commitment to sustainable development at a personal, local, national and global level.” (National Curriculum 2000)

So, having ascertained that young people are an important audience to geography and environmental education, what I now want to do is discuss their place in the risk society literature. Here I will argue that the risk society literature needs to deepen its understanding of how young people construct their environmental knowledges in order to better reflect the social practices at work.

Young people and the risk society

The risk society thesis highlights the demand for environmental education in contemporary society, and illustrates the social processes of risk we have to engage with when faced with multiple sources of expertise. In Beck's work (1998) young people are seen to play an active and important role with regard the environment. As he argues, “young people are dangerous because they are the future ... Given the fact that the future will be a different nature, young people hold the strings of defining it in their hands” (Beck 1998:80).

Beck sees young people as molding their ideas and understandings through multiple sources of expertise, for example in school, because of television, advertising, or the imposed values of peer groups. He notes that these sources force young people to conceive of, and organize themselves as “tinkerers with their own personalities” (1998:79). However, in saying this the actual processes involved in this “tinkering” are not discussed. The remainder of this paper will consider empirical evidence that provides insights into this tinkering, offer new ways of thinking about young people's practices, and question potential differences and similarities between the experiences of young people and adults.

A case study

In order to think about the processes involved in the construction of young people's environmental knowledges I wanted to observe young people's environmental learning practices myself. To do this I visited a botanic garden with over 150 young people. The botanical garden proved an ideal location as it has a long history of environmental

education and many institutions have dedicated education teams that liaise with schools, families and leisure groups.

For the research I worked at a well established Garden in the UK. This Garden, born out of the nineteenth century, offered an environmental resource that had specific catering facilities for young people's education. They had recently developed an extensive Study Centre in which two full time education officers worked. Every year they averaged over 400 school visits alone. The Garden arranged weekend and vacation workshops for young people to take part in and had a loyal group of family members.

I liaised with the Education Officers and through them contacted local schools and leisure groups planning to visit the Garden. Young people visiting with families were also recruited. Ultimately I worked with over just over one hundred and fifty young people, between 6 and 11 years old.

The actual research came in three stages. An initial meeting was arranged during which I would introduce myself and the work. At a time convenient to the group a group visit to the Garden would then be arranged. This allowed me to observe practices at the Garden. Where did they go? What did they do there? What did they talk about? How did they interact with the exhibitions? Whilst on these various trips the young people were asked to use disposable cameras, to take photos of their experiences of the Garden, and what they thought was important to their visit.

Having visited the Garden with the groups a final meeting was arranged to discuss the visit using semi structured interviews and focus groups in homes and schools. In order to encourage discussion of their experiences at the Garden and environmental knowledge acquisition more generally the photos the young people had taken at the Garden were used as prompts. Young people were also encouraged to draw pictures of the Garden during these meetings which were also discussed in some detail.

The material I was able to collect and interpret provided many fascinating insights into the practices of young people's environmental knowledge acquisition. However, for the purpose of this paper I will focus on one issue that became increasingly apparent; young people's interaction and negotiation with expertise.

The risk society thesis highlights trust as a central process in reflexive modernization and signals the public as active agents. I have found that young people's actions whilst visiting the botanical garden provided evidence which suggests that, as the risk society thesis purports, they actively engage with experts through a process of trust. Through my conversations with young people it became clear they trusted expertise gained from the Garden in two ways. Firstly they trusted that the knowledges the Education Officers at the Garden, as mediators for the Garden, would be accurate. This trust became apparent when many of the young people I spoke to discussed the imaginative scenario of becoming stranded on an island and the various dangers they would experience whilst inhabiting this hostile environment³. Many of these individuals had carefully thought

through the possibilities, and in light of such perceived dangers considered the Garden to be a useful resource to have visited. The Garden is home to various floral exhibits within which there are dangerous plants. On a number of occasions I was told how the visit to the Garden had helped students come to learn which plants were safe and which were dangerous. As Amelia (7 years) told me:

The Garden was good because the people [Education Officers] told us not to touch the things that are poisonous [pause] so like [pause] if you go to touch them [on an island] [pause] you wouldn't [pause] because then you know not to.

However, it was not only the communication of environmental knowledges about dangerous, poisonous, plants that was of interest to the young visitors concerned with survival. Alfie (8 years) was one amongst a number of people who made similar comments:

If you were stranded on an island then you'd have to learn about the plants there [pause] but we've been to the Botanic Garden and the lady [Education Office] told us all about the plants [pause] I know what the banana plant looks like now and that would give me food.

Daniel (8 years) re-sited such concern in the need for environmental knowledge in a more local environment when he commented that:

Like, say if you put some plants in the infants school, like, they might think they're not dangerous and say get a spine stuck in them because they go too close [pause] if they go to the Botanic Garden they hear all about the plants and then they know not to touch them.

These three examples go some way to highlight how young people actively trust the environmental knowledges provided by mediators at the Garden. They do not question whether the Education Officers at the Garden are telling the truth about the plants they portray as being safe and dangerous, but assume that what they are saying is right.

Secondly young people engaged with trust at the Garden by trusting the Garden itself. In this I mean that if they saw a plant and it was labeled "banana" they believed it was a banana plant. As Louisha (8 years) told me:

I didn't know [before visiting the Garden] there was a plant called coffee [pause]. I thought it was made in factories.

Similarly Oliver (9 years) told me:

I never knew cotton came from a plant I just thought it was made in factories.

In the same way Marie (9 years) told me how the Garden had provided her with the knowledge of what other environments felt like. As she commented:

You don't have to travel to the other side of the world to experience the Rainforest, you can just go to the Botanic Garden.

So, again there is a relationship of trust going on by the young person. Such quotes show how Marie and her peers presume the Garden represents expertise accurately, that plants are labeled correctly and environments echo the characteristics they symbolise. Many young people spoke of what it was like to be *in* the Rainforest, almost forgetting they were actually in a greenhouse just a few miles away from a busy city centre.

What I have suggested here is that, echoing the risk society thesis, young people use trust as an important process in defining relations with expertise. Here I have discussed the subtle nuances of young people's trust by identifying two types, one mediated through teachers and one directly experienced at the Garden. On both occasions I have provided a picture of trust whereby expertise is constructed through trust. What I now want to do is focus in more detail on the complexity of trusting and question whether this is the case with regard to the practice of young people's environmental knowledge acquisition. These insights will develop a more complex account of the social processes involved in young people's environmental learning and build on the risk society's understanding of young people's knowledge communication.

Constructing trust

The risk society thesis bases its model of communication on relations of trust. If we look at the previous section and who young people trust at the Garden we find it is those figures in their lives that conform to what could be thought of as a traditional figure of authority (teachers). These people have certain characteristics that place them apart from other actors with whom young people come into contact. For example they are associated with people and institutions who are perceived as learned, with years of experience, who hold positions of authority, and who others look to and respect. Certainly many young people seemed to have definite ideas of who they should gain their expertise from and what their position was within society. For example, as Stephen (8 years) told me:

A scientist, well they're experts in science and say, they may find something out. They pass that information on to the Government and the Government passes it on to colleges and schools, and teachers at places like the Botanic Garden.

In this example Stephen makes a number of assumptions. He assumes scientists to be the ultimate providers of knowledge and a body of people whose expertise can be trusted. He assumes knowledge will be communicated through various networks without being transformed in any way. And he assumes the knowledge that is received by the student in school is the same knowledge that the scientists discovered.

These assumptions may lead us to believe that young people only engage with trust in very simplistic ways. Certainly Stephen seems to offer a simplistic version of trust. But do young people trust in such simple ways? I observed that in practice young people (as young as eight years old) were aware of varying degrees of expertise and *truth*. What I will do in the remaining two sections of this paper is start to unpack young people's relationship with trust. To begin with I will look at what makes someone or something trustworthy in the eyes of young people. Having done this I will then question what happens if that expertise is questioned by other 'reliable' sources of expertise. How do young people make sense of contested knowledges? What processes do they engage in to come to their own understanding?

What makes someone/thing trustworthy?

In talking to young people I found that they trusted the expertise of the Education Officers at the Garden for a combination of reasons. While their position of authority was important there were two other issues that proved to be crucial to contributing towards young people's trust. Firstly, they were expected to have prior knowledge. As Edward (11 years) noted:

Its important they [teachers] know the right facts [pause] that when you've got a question they can answer it, otherwise you'll go round thinking there's hundreds of this endangered species and it doesn't matter if you kill one or two because there'll be millions to take it's place.

Here then it would seem not only is prior knowledge important to constructing trust but also the conviction of an argument and how authoritatively a position is argued. As Edward notes, they have to know the facts and be confident in being questioned. While the public can never be entirely sure that facts are 'right', if the communicator of those facts performs with conviction and authority little argument seems to be made. Speaking with authority certainly seems to provide young people with an image that Education Officers at the Garden had a huge depth of knowledge. All those I spoke to visiting the Garden with schools were impressed by all of the Education Officers' knowledge. As Becky (10 years) noted:

The teacher spoke very well, I remember him describing every single plant.

Here Becky trusted the Education Officer because of a perceived depth and breadth of knowledge that was communicated clearly and with authority. Both teachers visiting with their students, and young people themselves, often commented upon the breadth of knowledge the Education Officers at the Garden possessed. After visiting the Garden, one teacher commented how the trip had surpassed any expectations. Amongst other things she said that:

The teacher was really good at relating it to the children's experiences. It was well thought out, they [the Education Officers] knew what they were talking about and had all the information you could want at their fingertips [pause] they were great.

Secondly, and seemingly of equal importance to how an expert is constructed in the minds of young people is how they present themselves. In particular I found that young people associate the characteristic of expertise with age. It seemed that young people, perhaps unsurprisingly, trusted older people more than, as the case below illustrates, teenagers. As Rachel (10 years) noted about teachers:

It's got to be someone who really knows, it can't be a sixteen year old chatting about something he doesn't even know about himself.

Here, trust is related to the amount of knowledge a person is perceived to have. The passing of the years is associated with greater knowledge acquisition and the potential to communicate more trustworthy knowledges.

From these insights we can begin to think about how young people construct experts. Through the possession of various characteristics, Education Officers at the Garden perform out a knowledgeable identity⁴. They are of a particular age, and hold a particular position. They communicate their expertise in an authoritative manner and are perceived to have a broad and in depth knowledge of that which they communicate. This is an important point and re-emphasises young people as active agents in the communication circuit. Based on the various criteria listed above young people decide who to trust and who not to trust. Young people do not simply trust everyone. However, what I have not discussed is how young people negotiate different sources of expertise. If we return to the risk society thesis we find it emphasises the fact the presumed public actively negotiate various sources of expertise. We may read a report, hear a newscast and watch a programme. Each source of expertise may bring a different perspective on the same story. As adults it is presumed we have the ability to negotiate these various sources of knowledge and come to an informed understanding. We place doubt on some sources of expertise whilst trusting others. This practice of doubting is of fundamental importance to the communication process and as Beck (1997:40) argues "self confident doubt is the original expression of skepticism in a civil citizenry." As he goes on to say "doubt must not be equated with ignorance ... Doubt arising not from ignorance but from greater knowledge and further questioning is the most certain victor of modernity" (1997:166). By focusing on these processes of trust and doubt highlighted by the risk society thesis, I will question to what extent young people engage with similar processes in the following section.

Negotiating expertise

When young people visited the Garden I found the knowledges they came to understand were not the product of a single source of expertise. I found young people were aware of different sources of expertise which they had to negotiate in order to arrive at their own informed understanding. Alex (8 years), by way of example of this point, told me how:

They [the Education Officers] said at the botanical gardens that this cactus could only grow a metre high but my mum said it was more than that [pause] I get very confused.

Here, Alex is having to negotiate contrasting information from two people he perceives as knowledgeable and would usually trust without question – a teacher and a parent. Tracy (9 years) told me how she usually trusts her friend Alison. However, on one occasion at the Garden she decided to trust the Education Officer. She told me how they were discussing the cocoa plant she had looked at:

Katie [my friend] said that on the chocolate plant the dark ones [she indicated the seed pods] were for dark chocolate and the yellow ones were for light chocolate, and I asked the women [the Education Officer] and she had a completely different story [pause] but I believed the women because she worked at the Botanical Garden.

Another example of how young people had to trust one source of knowledge and doubt another came with Simon (11 years). He told me about a situation concerning his science teacher at school:

Simon: When we learn about plants in science I always think Mr Davies is wrong.
Verity: *Why's that?*
Simon: I don't know, I've read lots of books and when he tells me something completely different I think 'that's not right' [pause] I don't believe him.

Here Mr Davies is performing a knowledgeable identity, as teacher. He is of a particular age and social position. However, Simon doubts the knowledge he is communicating to him as it contests other sources of knowledge he usually relies on (books). This situation echoes Beck's insights into social practices in the risk society where doubt arises from greater knowledge. Such negotiation, I would argue, is indicative of how many young people come to learn and highlights the social processes of trust young people negotiate are not straightforward. Trust is actively engaged in two ways. Firstly it is dependent on expertise being performed in a specific way, the age of the communicator and the level of authority they speak with. In addition to this the young person negotiates trust by judging the expertise communicated to them with relevance to other sources. Young people do not close around one reading but negotiate various sources and in doing so call on doubt.

So far I have highlighted how young people engage with trust and doubt, but have yet only commented about this in relation to young people negotiating two sources of knowledge. If you look at the previous quotes you find that young people talk about "believing" or "not believing" different sources. However, upon asking young people about such dichotomies in more detail it becomes clear that relationships are not so clear cut. In order to deepen our understanding of the risk society and young people's practices within it I asked the young people to think about who and what they trust. Answers came in a bewildering array of possibilities and situations where various sources of expertise were not only named but placed in an order of trustworthiness because of various attributes.

Amongst those young people I spoke to there was a general consensus that they would trust more what they read in books than what their teachers told them in school. Young people seemed to be aware of some of the processes involved in writing books. It was from this knowledge base that such information sources were considered more trustworthy than the knowledges their teachers were able to offer. For example, books were seen to be more trustworthy because as James (9 years) told me:

Teachers aren't experts at everything [pause] and the author of a book will know a lot more than a teacher on that subject because they've done the research on it.

Again we return to this idea of a performance of knowledgeable identity. Books, from certain young people's perspectives, are the product of research which they consider to be trustworthy. While such quotes doubted teachers' competences in this situation, trust is further negotiated when more sources of expertise are considered.

Though I found books are generally considered more trustworthy than teachers, I found television to be more trustworthy still⁵. Again young people debated the merits of the long, arduous research that television necessitates. To some there was a sense of ultimate truth in what television communicates; as one individual commented, "television never lies" (Adam 9 years). However, this trust was further questioned when considering the Internet. I found that most of the young people I spoke to reshuffled their ideas when faced with expertise from this source and placed this as the ultimate in supplying trustworthy knowledge. James (9 years) commenting that:

It took so long to make it, and so long to do the research for it then such a lot of it's got to be right.

Similarly Shaun told me he trusted the Internet the most because "more people have thought about it" (June 2001). Samantha echoing this with her comment that "the internet is good [pause] it's proper cos it's full of information all put together by lots of people".

Conclusion

In this paper I have shown how young people negotiate expertise in practices in similar ways to that purported by the risk society thesis. I have identified a number of processes integral to young people's construction of trust. I have shown young people as actively constructing trust around the performance of various characteristics of age and social standing. I have illustrated that young people negotiate various sources of expertise including teachers, books, television and the Internet, and have provided evidence that suggests these sources of expertise are negotiated depending on what sources are available at any one time. In saying this I do not assert that young people always trust books over teachers, the Internet over the television, but instead that this process of negotiating expertise is active and should be considered in other geographical and temporal contexts.

This research suggests that literature pertaining to the risk society needs to think through relations of trust more carefully. Having made a close inspection of processes of trust I have found young people to negotiate what they believe to be trustworthy. These insights have brought focus to the risk society thesis and highlighted processes that may be equally relevant to adults. Certainly from my own perspective, I trust certain medias over others. While these may not reflect the same medias young people trust, this negotiation is a crucial process to communication. Research is needed to find out what and how adults trust. What are the processes involved? How are these structured? Certainly this study is in no way exhaustive; it is but one case study. However, it has shown the need to assess how young people are thought about in the risk society thesis and has illustrated that using the risk society as a framework can provide interesting insights into young people's practices of environmental knowledge communication, and add to wider geographical debates. While young people remain an important group to the communication of environmental knowledges such findings will become more developed with time thus working towards an ever more comprehensive understanding of how knowledge gets communicated, and adding to expanding geographical understandings of society's changing relationship with, and in, the environment.

Notes

¹ An exception to this is Burgess, Harrison and Limb's (1988) work on urban fringe woodlands.

² See for a recent exception to this the special issue of *Journal of Rural Studies* 18(2) (2002) dedicated to young people.

³ Why young people used this imagined situation I am unsure. However, it may be because these young people are living a childhood filled by more powerful decision makers (parents, teachers, guardians) where they do not have to rely on their own expertise in their day to day lives. As a result the desert island can be seen to provide them with a place where they can imagine they would need to be self reliant, and draw on certain expertise to ensure survival.

⁴ Perhaps surprisingly gender was not an issue in the construction of expertise.

⁵ The television programs mainly discussed were BBC wildlife documentaries, programs on the Discovery Channel, 'The Really Wild Show' and gardening programs such as the make over program 'Ground Force'. Cartoon series, such as 'The Wild Thornberry's', were not discussed. However, I feel it would be interesting to see whether genre had an effect on the negotiation of trust.

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References

- Adam, B. and van Loon, J. (2000) 'Introduction' in Adam, B. Beck, U. and Van Loon, J. (eds) *The Risk Society and Beyond*, London: Sage, pp. 1-31.
- Aitken, S and Wingate, J (1993) 'A preliminary study of the self-directed photography of middle class, homeless and mobility impaired children' *Professional Geographer*, 45, pp. 66-72.
- Aitken, S. (1994) *Children's Geographies*, Washington, DC, Association of American Geographers.
- Anderson, K. (1995) 'Culture and Nature at the Adelaide Zoo', *Transactions of the Institute of British Geographers* 20(3), pp. 275-295.
- Anderson, P. and Tindal, M. (1972) 'The concept of home range: new data for the study of territorial behaviour' in Mitchell, W. (ed) *Environmental Design, Research and Practice*, Los Angeles: University of California Press.
- Beck, U. (1992) *Risk Society*, London: Sage.
- Beck, U. (1997) *The Reinvention of Politics* Cambridge: Polity Press.
- Beck, U. (1998) *Democracy without Enemies* Cambridge: Polity Press.
- Blaut, J. 1971 'Space, Structure and Maps' *Tijdschrift voor Economische en Sociale Geografie*, 62, pp. 1-11.
- Breitbert, M. (1995) 'Banners for the Street: reclaiming space and designing change with urban youth' *Journal of Education and Planning Research*, 15, pp. 101-114.
- Bunge, W.W. (1973) 'The geography' *Professional Geographer*, 25(4), pp. 331-7.
- Burgess, J, (1990) 'The Production and Consumption of Environmental meanings in the mass media: a research agenda for the 1990's' *Transactions of the Institute of British Geographers*, 15(2), pp. 139-161.
- Burgess, J. Harrison, C.M. and Limb, M. (1988) 'People, Parks and the urban green' *Urban Studies*, 25, pp. 455-73.
- Cordes, C. and Miller, E. (eds) (2000) *Fools Gold: a critical look at computers in childhood*, London: Alliance of Childhood,.
- Cosgrove, D and Daniels, S. (eds) *Iconography of Landscape*, Cambridge: Cambridge University Press.
- Cosgrove, D. (1984) *Social Formation and Symbolic Landscape*, London: Croom Helm.
- Davies, G. (2000) 'Narrating the Natural History Unit: institutional orderings and spatial strategies' *Geoforum*, 31 (4), pp. 539-551.
- Douglas, M. (1994) *Risk and Blame: essays in cultural theory*, London: Routledge.
- Downs, R. (1985) 'The representation of space; its development in children and in cartography' in Cohen, R. (ed) *The development of spatial cognition*, New Jersey: Hillsdale, pp. 323-46.
- Evans, S. Gill, M. & Marchant, J. (1996) 'School Children as Educators: the indirect influence of environmental education in schools on parents' attitudes towards the environment' *Journal of Biological Education*, 30(4), pp. 243-48.
- Franklin, S. (2000) *Global Nature, Global Culture*, London: Sage.
- Giddens, A. (1990) *The Consequences of Modernity*, Cambridge: Polity Press.

- Giddens, A. (1998) 'Risk Society: the context of British Politics' in Franklin, J. (ed) *The Politics of Risk Society*, Cambridge: Polity Press, pp. 23-34.
- Giddens, A. (1999) *FAQ's*, www.lse.ac.uk/Giddens/FAQs.htm [17.7.01].
- Grove-White, R. (1998). 'Risk Society, Politics and BSE' in Franklin, J. (ed) *The Politics of Risk Society*, Cambridge: Polity Press, pp. 50-53.
- Hart, R. (1979) *Children's Experience of Place*, New York: Irvington
- Hart, R. (1997) *Children's Participation*, Earthscan: London.
- Holloway, S. and Valentine, G. (2000) *Children's Geographies*, London: Routledge.
- Irwin, A. Allan, S. and Welsh, I. (2000) 'Nuclear Risks: three problematics' in Adam, B. Beck, U. & Van Loon, J. (eds) *The Risk Society and Beyond*, London: Sage pp. 78-104.
- Jacks, P and Penrose, J. (1993) *Constructions of Race, Place and Nations*, London: UCL Press.
- James, A., Jencks, C. and Prout, A. (1998) *Theorising Childhood*, Cambridge: Polity Press.
- James, S. (1990) 'Is there a 'place' for children in Geography?' *Area*, 22(3), pp. 278-283.
- Jones, V. (2003) *Young People and the Circulation of Environmental Education*, Unpublished PhD thesis, University of Wales: Aberystwyth.
- Katz, C. (1993) 'Growing Girls/ Closing Circles' in C. Katz and J. Monk (eds) *Full Circles, geographies of women over the life course*, London: Routledge, pp. 88-106.
- Katz, C. (1991) 'Sow what you know: the struggle for social reproduction in rural Sudan' *Annals of the Association of American Geographers*, 8, pp. 488-514.
- Lash, S. and Wynne, B. (1992) 'Introduction' in Beck, U. *Risk Society: towards a new modernity*, London: Sage.
- Massey, D and Jess, P. (1995) *A Place in the World?* Oxford: Oxford University Press.
- McRobbie, A. (1991) *Feminism and Youth Culture*, London: Macmillan.
- National Curriculum (2000) www.nc.uk.net/esd/gq3.htm [accessed 17.6.02].
- Philo, C. (1992), 'Neglected rural geographies: a review' *Journal of Rural Studies*, 8,(2), pp.193-207.
- Prout, A. (2000) 'Childhood Bodies: construction, agency, hybridity,' in A. Prout (ed) *The Body, Childhood and Society*, London: Macmillan Press.
- Sibley, D. (1995a) *Geographies of Exclusion*, London: Routledge.
- Sibley, D. (1995b) 'Families and Domestic Routines' in Pile, S. and Thrift, N. (eds) *Mapping the Subject*, London: Routledge.
- Skelton, T. and Valentine, G. (1998) *Cool Places: geographies of youth cultures*, London: Routledge.
- Thrift, N. (2000) 'Reflexive modernization' in Johnston, R. Gregory, D. Pratt, G. Watts, M (eds) *Dictionary of Human Geography*, Blackwell: Oxford.
- Tindale, S. (1998) 'Procrastination, Precaution and the Global Gamble' in Franklin, J. (ed) *The Politics of Risk Society*, Cambridge: Polity Press, pp. 54-69.
- Valentine, G. (1996a) 'Children should be seen and not heard' *Urban Geography* 17(2), pp. 205-20.
- Valentine, G. (1996b) 'Angels and Devils: moral landscape of childhood' *Environment and Planning D: Society and Space*, 14, pp. 581-99.
- Valentine, G. (1997a) 'Oh yes I can' 'Oh no you can't': children and parents' understandings of kids' competence to negotiate public space safely' *Antipode*, 29(1), pp. 65-89.

- Valentine, G. (1997b) "My Son's A Bit Dizzy." "My Wife's A Bit Soft." Gender, children and the cultures of parenting', *Gender Place and Culture* 4(1), pp. 37-62.
- Valentine, G. Skelton, T. and Chambers, D. (1998) 'Cool places: an introduction to youth and youth cultures' in *Cool Places: geographies of youth cultures*, London : Routledge, pp. 1-32.
- Ward, C. (1990) *The Child in the Country*, London: Bedford Square Press.
- Whatmore, S. (2002) *Hybrid Geographies*, London: Sage.