RSA Arts & Ecology

in partnership with Arts Council England present

Towards an Eco-Cinema

Wednesday 28 September (evening) and Thursday 29 September (all day)

Watershed, Bristol, 2005

Watershed, Bristol 29th September

Introductions

Michaela Crimmin. Both the RSA and the Arts Council of England welcome you to this event which spans into the Communicate conference this evening and tomorrow.

Yesterday, Mark Nash introduced the complexities and enormity and the inter-relatedness of the issues that we face when we take on this very big word – ecology (and I'm not going to labour a definition of it at this point) - and you absolutely couldn't fault him for doing that. Having watched and being poleaxed by the issues that were raised, for instance, in the film 'Darwin's Nightmare' which we saw last night, around pollution, poverty, mortality, humanity, greed and the whole denial, we returned to our very nice hotel and there is this bar of soap which we had yesterday and probably didn't use very much and it was gone and replaced by this whole new bar of soap and new towels this morning, kind of, if you needed anything for insomnia, there was plenty going on yesterday.

In your pack, there is a quick introduction to Arts & Ecology which is a programme of what we are calling open research which is the context for this event and other events and other activities and I don't want to kind of bite into the time today by describing what you can read and also see on the website but your participation in this research is very much welcomed and we hope that, if we don't make contact with you, that you'll make contact with us. We want to use everybody's experience and views to inform what the RSA and, indeed, other organisations can do by way of being a catalyst. It's very interesting how, coming from London with a sort of arrogance of running events in London where it is very easy to get an audience, but coming here which is kind of the hub of media and arts activities and environmental organisations, we clearly haven't penetrated them at all, or else people are simply not interested in this meeting point between arts and ecology which I kind of don't believe. As Robert McFarlane pointed

out earlier this week, we need a co-operation between scientific enquiry and imaginative figuration in dealing with the environmental challenges being faced really by the entire world and the fact that many artists, in fact most artists, seem to be in as much denial as the rest of us and this is somewhat alarming and interesting. Before handing you to Mark Nash, I would like to repeat what I said last night by way of a big thank you to Lucy Steeds, who I can't see here, but who has brought this event together with Mark, with an energy and an intelligence and a generosity which is extraordinary and thank you to the team of people I work with at the Arts Council and at the RSA and, as ever, thank you to the artists who have, as ever, engaged us with being provocative and challenging, from Joseph Beuys to Rachel Carson and right through to the numbers of artists today who are already dealing with these issues.

Now I'll hand you over to Mark Nash who has put together a real resource with this event and by bringing our attention to both historical and contemporary work and the issues that come out of them and by engaging the speakers who we welcome very much here today. I think he has created something which will have its own life and its own momentum and brings a huge amount of knowledge and reflection and openness which are all key to moving towards a better understanding and maybe motivation – Mark.

Mark Nash. Thanks Michaela. Yes, like Michaela I would just like to join her in thanking the organisers very much and what I said yesterday. I'm very pleased to be here and I'm very pleased the RSA has asked me to kind of facilitate a discussion as Michaela says, we hope we are going to be able to build up some kind of resource in these various domains, today dealing with the moving image, film and television.

((I am going to begin with)) a couple of clips from an American television programme about Rachel Carson. Rachel Carson came to mind when we were planning this conference because when I was growing up that was how I learned about issues of ecology and environment and she had just published the book *Silent Spring* and I remember being very militant in those days and berating American friends for destroying the whole of the continent. Never having been to America, never having realised that it was a big place, unlike the UK and it's possible for all these terrible things to go on there without people necessarily noticing. We are not showing the whole programme because, in many ways, it is aesthetically rather tedious I have to say in the sense that it's directed for an American audience and we were talking about this last night, particularly with Jeremy, in the way you have a different aesthetic structure in American television, which is much more geared to short edits, punchy information but basically telling people what they are supposed to think about things. This programme was produced about 10-15 years after Rachel's death by an American company and shown on the American Experience TV

programme. Just to set the scene briefly, Carson was already a best selling author before she wrote *Silent Spring*. She had written *The Sea Around Us* in 1959 which had won prizes and had been the first book on documentary issues to be on the best seller list in America but with her book *Silent Spring* she almost single-handedly took on the US pharmaceutical industry and, as I mentioned in the notes going with our conference today, she in a way can be seen as something of an encouragement to those who still believe in the possibility of individual urgency affecting social and political change. She was that sort of independent researcher – she worked for the marine biology laboratory in Wood Hall but essentially with two or three colleagues and some supporters, she mounted this campaign which was sufficiently successful to achieve a major reduction in the use of organic pesticides which she showed were working their way up the food chain with devastating affect. As Michaela mentioned, I wanted to have this kind of reflection on earlier film about pre-war and post-war because the parallels between present and past situations are uncanny and often disturbing. In this film we see the reaction of big business trying to discredit the results of her research and that has many parallels to the way big business works in G W Bush's America to discredit the results of climate change and other environmental issues. The thing that always amazes me in the current debate are the ways in which you can see the interests of capital so to speak over-riding the needs of human life itself. You can see someone like Bush or the right wing republicans who are actively encouraging policies which their own grandchildren will inherit and it's very difficult to image people who have business in front of the life of their families, let alone humanity itself. So we'll look at about 5-10 minutes of the introduction which starts with a few horrific images which they gleaned from the archives on the unrestricted use of chemicals and then we'll cut to more than two thirds into the programme where we're looking at the events leading up to actual publication of the book.

Film clips from: *American Experience: Rachel Carson's Silent Spring*, 1993.

Mark Nash. So we have 10 minutes or so for discussion. For various reasons, I couldn't show the whole of the programme but I hope you can see the very American form of television which often gets in the way of the content because it was made in 1993 so there was a lot of change in the intervening period between early 60's and all these years later so it's strangely un-reflective but on the other hand the kind of heroisation of Rachael Carson and the sense that even then it was possible to bring about change quite massive legislative change through the research activities of individual and her book is quite amazing and one could say it wouldn't happen in quite that way again but I think maybe we shouldn't be quite so depressing as that, we should try to start on a positive note. What we cut out essentially

was what I thought a rather over long history of her training as a scientist, a biologist working in Wood Hall and then beginning to investigate the relationship of pesticides to deaths and abnormalities to how it's transmitted in the food chain so I don't know whether anyone has any thoughts on the films or connection to yesterday and wanted to make.

Paula Willoquet-Maricondi. I just wanted to point out that Rachel Carson is under attack again now. There are a lot of renewed debates and she is being blamed now for being the reason why malaria is spreading because DDT, there is a movement to reinstate the use of DDT and, of course, it's still used in some parts of the world but there is quite a bit of debate once again and dialogue around Rachel Carson so I think it's very appropriate that you have brought her up to our attention again and it's just amazing that this is happening.

Mark Nash. Yes one of the things that this commentary was much too over-confident about was that these changes had been affected universally, what they were talking about was North America or the West because a lot of those pesticides continue to be used and are still used in the under-developed world and so that, in a sense, there is another *Silent Spring* to be written about the ongoing affects in Africa and, to some extent, Asia as well.

Jeremy Bristow. It's interesting to speculate on how successful she would have been writing *Silent Spring* in the current climate of the United States because the film makes it quite clear that getting the commanding heights of the government through Dow and then Kennedy was incredibly important in helping her push on through against the barrage of criticism and now in the United States, ((and)) to a certain extent elsewhere and certainly less so in the U.K., government has been in a sense taken over by the right and it's very interesting to see what has happened though. To counter-balance that, it's interesting what she was saying almost as an individual then, and how the public now doubt and there are certainly issues now in this country about BSC and foot and mouth. Our consciousness as nation really is of suspicion of both scientists and government.

Mark Nash. Good point.

Question. Joe Smith from the Open University. I think one of the other substantial differences is that there isn't actually that much space for heroes and heroines in the way that I think there was at that time. If you look at environmental organisations, they are now very large global sophisticated bodies with pension schemes and career paths and at the same time the business world is not an undifferentiated mass of black hats. There are very curious and I think exciting things happening within conversations, interestingly, at the very top of those organisations. Typically the mass of management in blue chip companies are not engaged in thinking about what sustainability

means for their companies but the most surprising companies are having pretty advanced discussions about what climate change or biodiversity loss or mass urbanisations are meaning for how they work. They are asking very difficult questions of themselves about what it means to have a licence to operate which I think is what Shell invented in about 1900 and dusted off again in the mid '90's. So I think there is an interesting challenge for the arts and creative broadcasting and commentator community to help lever open the divide between those parts of the business community ((who)) are singing from a Rachel Carson hymn sheet these days and they're there, I've met them, I know they exist, and a probably frankly larger body who are really still wearing the black hats.

Mark Nash. Yes, I think this came up in the previous RSA discussion when it was pointed out that, I think it was Shell Oil, but exactly as you say that a number of these key organisations have decided that they need to plan for the future so they need to engage with issues like carbon trading and climate change because otherwise their business operations will be effected too so I think there is a kind of straight forward business motivation as well as a different understanding as to how the world works. So I think you are right, the world has changed very much since that programme was made. Question from the back

Question. Deborah Jones. I think watching that, it was very moving and at the same time I think it would be really sweet if things were that polarised today and if we could have some of those perhaps simplicities although they weren't simple and I think it was very interesting what was just said because opening up those dialogues is one of the most interesting ways for artists and other people to explore this area and I don't think it's very helpful to have the 'goodie/baddie' kind of scenario because what I find most interesting is exploring my own participation, the way I take part in some of these things and having those conversations with people in business or out doors in local nature reserves and local councils and so on, it is very interesting, it's very complicated.

Paula Willoquet-Maricondi. Just to follow up on the comment about the business, since we are in part here to become aware of films I wanted to mention a fairly recent film called *The Next Industrial Revolution* that addresses those very issues and features companies that are making an attempt to operate in more sustainable and ecological sound ways.

Mark Nash. O.K. Well, I think we may now move on to our next session. Just to sum up briefly, it does seem, to take the question right at the back that there is some kind of balance that we need to find between our own subjective involvement in these issues and a broader understanding of the kind of forces that are currently at play. So not on the one hand give way to any form of pessimism that any form of

political change is impossible because that would be crazy and giving up the argument but somehow finding ways were pressure can be brought to bear. I was very conscious seeing the obituary of Richard Fitter the other day who was one of the great bird watchers and, in a sense, taxonomists and thinking in a way there is a period also of a certain kind of natural history and observational relationship to nature which has shifted at the same time, that we are developing much more hopefully dramatic and ecologically conscious relationship which I think will come up in a number of the contributions in our next panel. So if we take a 2 minute break and the panellists can come up and we can quickly introduce them.

Panel discussion

Water: Issues of Supply, Resources, Pollution and Development.

Mark Nash. Welcome to our first panel discussion. We'll have a series of presentations: Jonathan Car-West, Jeremy Bristow and Timothy Collins. Just to briefly introduce Jonathan. As I mentioned yesterday, we wanted a session in which we could discuss development issues as well as how they're reflected in media presentations and we also wanted, in a way, to focus around issues of water and water resources so in one way or another, these themes will come up in the three presentations but it is by no means a fixed restriction.

O.K. so Jonathan Carr-West is a programme development manager at the RSA and he is responsible for developing and supervising a portfolio of research projects designed further to realise the RSA objective of creating a principal led and prosperous society. Current projects include water and sanitation in the developing world, migration and economics and personal carbon trading and I think today Jonathan is going to talk a little about water and sanitation in the developing world. Jonathan.

Jonathan Carr-West. Thank you, yes I'm not going to talk about film or media or arts in any sense but I am going to talk about water and I am going to tie that up with development. What I'm going to talk about are some of the problems around water but I think these are fairly well known so I'll just sketch over those because I really want to talk about some of the opportunities connected to water because I think its very important in these discussions that we face up to these problems but that we don't get hemmed in by them and we also look at how we can move forward. So I'm going to talk about water and about how we can use water, about what the impacts of water and sanitation can be and about how we use it as a tool. In doing so, I therefore want to situate the discussion around water not just from an ecological framework but from a broader socio-economic framework and tie it in to a whole raft of development and anti-poverty issues. Now the problems we all know about: there are more than 1 billion people in the world who don't have access to clean drinking water and more than 2 billion who have inadequate sanitation, 3.5 million people who die from water related diseases every year, most of them children. Water is the subject of a number of international development targets, it's millennium goal no. 7 to reduce the proportion of people without access to safe drinking water by half by the year 2015. The World Summit on sustainable development agreed to halve by 2015 the number of people without access to basic sanitation. The caveat to that is that we are a long way off meeting these goals. The situation is

getting worse and not better. Broadly speaking because for every 1 person we move out of inadequate water and sanitation situations about another 2 are born into it. With current progress, we are not going to reach the water target in Africa for example before 2050 at the very least, so that's another 20 years of 3.5 million people dying. I mean do the maths. These problems are likely to get more acute. There is a finite global scarcity of water. Increasing population growth will put further pressure on that. Things may get worse before they get better, but as I said there are also opportunities for water. Improving water is a fantastic tool for development. I'm putting it in that framework not to say there are no problems but to actually say that some of the problems are more urgent and more difficult and more important than we might otherwise think. Water is not just the basic necessity of life that we know it can be but it's even more than that if that's sounds possible. Because, we think at the RSA that the cheapest and fastest way of changing the total poverty cycle is by the provision of clean water and sanitation. Just to think about in Europe in the last century, the highest reductions in mortality rates were recorded with the advent of safe water and piped sewage, nothing else. Nothing else has made such big improvement. It was the single most important intervention in terms of mortality that we've had. Now, I'm not going to talk very much about the RSA project with water and sanitation because I don't want to get into that sort of detail. What we're doing is looking to finding an investment model which will enable water and sanitation provision in the developing world because we don't think that aid is going to be big enough to tackle that problem, the scale of which I indicated. We are using a particular engineering technique which I also won't go into in any particular detail except to say that it's much more organic, it's not about importing Western water provision models where you have central filtration systems and they pump things round ring mains and it's all very technologically intensive. This is about using typography, being sensitive to local environment, using natural drainage paths, etc. to provide integrated water and sanitation. By integrated water and sanitation, I mean taps in people's house, toilets in people's houses. This illustrates how slum settlements grow up alongside natural drainage paths and we can talk about that later if people want to. Because what is really important is the impact that improving water and sanitation has. These are some World Bank and UN development field notes based on a project that someone we were as working with did on Baroda and 5 years later after you have sorted out water and sanitation you find that the average body weight of women has increased. There is a 90% reduction in serious disease, no case of malaria and the last one, most importantly I think, that incomes increased and women's incomes double. It's quite easy to skate over that figure. Think about what else could you do that would double people's incomes? A lot of development work at the moment focuses Government issues - on education. These things are important

– can they double people's incomes in a 5 year period? What could Gordon Brown do that would double your income in a 5 year period? There are other impacts, high literacy rates, investment in shelter, these are all connected things and what they indicate is improving water and sanitation provides a massive impact on the general wellbeing of a community and it's the single, most hard hitting and, in fact, one of the cheapest interventions you can make to improve the health, education and wealth of those communities. I don't really want to talk about that so much because I want to show you some pictures of what that looks like and I think we should emphasise that these are projects where the only aid based intervention has been around water and sanitation. All the other improvements that you are going to see come on the back of that generated by the communities themselves, investing, creating more resources, making money and starting businesses, etc. This is water supply, it's not just a basic need, it's about going further than that because this is what a standard aid project water supply looks like 5 years after it's been provided and it's water but it's not great. You wouldn't really want it as the sole water source for your family shared between 20 or 30 houses. This is what an aid project communal latrine put in as I thought that was the best way of serving that community. That's what it looks like 5 years later. It's not very nice but if you go for proper integrated water and sanitation, these are some of the things that happen. Before, during – looks a bit worse – and after. Look at that difference. Before, in Baroda, during and after. Andrabad - think about living there, in that place, during and after. Don't look at the roads and houses, look at the people – how they are dressed, their faces, look how healthy or unhealthy they look, after - solely through the provision of decent water and sanitation. So you can see that the impact goes much beyond just preserving life, giving people the means for life which, of course, clearly you have to have but the impact of water is much greater. It ties into a whole series of developmental opportunities. 2 Years later, 5 years later – people have got a lot richer they are starting to show off, build extensions. People start to extend their huts, putting proper roofs on and within 5 years they are going for all out extensions. You are no longer dealing with the necessities of life, you are dealing in the good things of life. 10 Years later, a slum is not a slum it becomes integrated into the general urban fabric. So I don't have any huge conclusions, apart from the obvious, to draw from this but just to say that within the context of this sort of conversation and the sort of issues we are debating today, it's very easy to see ecological problems solely as about the balance of nature, all these good and important things, but I think it's really important to realise that it is much more inter-woven than that, that ecological issues, environmental issues connect to developmental issues, connect to community issues, connect to wealth issues and that's why these interventions are vital. Thank you.

Mark Nash. Thank you Jonathan. I think we'll move on and then, if it's OK, take questions at the end. It was an excellent presentation which really did exactly as we wanted it to do, to introduce the issues at a really informative and controversial level. It reminded me also that are some films made in this area but there are films made in Mozambique around these issues of providing water supply and using the films to then educate local communicates so that they can replicate these affects themselves so there are quite local interventions that film and media can be involved in as well. This leads on to our second presentation by Jeremy Bristow who is a producer for the BBC natural history unit where he now specialises in making films relating to the environment. He began working at the BBC in current affairs News Night, correspondent on Panorama and then in 1995 after a filming trip to Cambodia where he was witnessing extensive, deforestation, he decided to concentrate on films on environmental issues. His films, such as *The Price of Prawns*, *The Price of Salmon*, *Kings of the Jungle* have been seen by many people here so Jeremy I will be very interested to hear what you have to say. Thank you.

Jeremy Bristow. Thank you very much. What I'm going to show you has very little to do with water. A couple of years ago, we had a proposal for a three part series on the issues of water both in this country and globally and we had it turned down so I haven't done very much on water. I also wanted to say having seen the Rachel Carson clips earlier on just how moved I was and it is interesting, and being someone who makes films and documentaries for an institution like the BBC and issues around that, but I was nearly feeling tearful watching that despite what Mark says and the over laden American commentary, it is very very powerful and it does come back to what the lady at the back said about as it were good people, bad people or the struggle of good people. It's great stuff for stories, it's very moving and it still is a great way to motivate people. As Mark said, I became more and more involved in the environment from a trip to Cambodia and then what was happening to the planet seeping in on me and realising that as a journalist that is what I should be doing. As journalists we have been for years been covering the beastly things that man does to man and that for instance hits the agenda but actually as a journalist, the biggest story on the planet is actually what's happening to the planet, not what we've been doing to each other for thousands of years and doubtless, sadly, will continue to do. That's the noise at the top but in 200 years time or in fact 50 years time, our descendants are going to be wondering what we were doing with what's happening to the planet and to an extent, that's what's motivated me. One of the things that happened to me as rather a late comer as it were to the issues of the environment and the way I portray my work – I don't say it's art – but the work I do in a sense is like being a convert to something and you do see things very much in terms of black and white and I want to show you a clip from one of the

earlier films I did which was regarding the forest fire that occurred in 1997/'98 in Borneo and Sumatra and spread right across Asia with a huge impact on health as well as the environment. I was commissioned to do a film in a very short time to coincide with the Commonwealth Olympics because our commissioners at the BBC assumed that the fires were likely to occur again – they didn't realise that it was connected with the El Nino and they weren't going to occur again - and fortunately, as one has to do in television, one starts with whatever the commission is and then turns it to what one wants to do and in a sense here was a story I could track back to de-forestation and that's what I proceeded to do. So I'll show you a couple of the opening minutes of this film and then tell you more about it.

(Film starts) ***awaiting details.

The film was a golden opportunity, I was on holiday, I was rung up could I make this film for transmission within 7 weeks. It was going to go out on BBC1, there was pre publicity, I mean this had never happened before. It rarely happens with the BBC that one gets an opportunity to make a film like that. What that film shows to some extent, when I look back at it and I look back at myself as somebody making films and making films for the public but what was driving me was, despite my training in objectivity and balance, what I really wanted to do was stuff Bob Housan and stuff Soharto. We did the science, we did the journalism, we got the information we wanted, we had the evidence when they blamed the local tribes people for the fires that it was clearly these guys and their minions that did it. We got the satellite pictures to show where the fires were first started, we got the guys who were paid to start the fires and, in a sense, even now, watching it there is a sense that it's very naïve, very primitive which is, yes, got you, and that's where one starts and to some extent making films about these issues up to a point, I have to confess, that's where I started. I'm going to show you another clip because in thinking about this and reflecting back, (that was in September 1998) I suddenly realised that there was a sequence we shot for this film, which we did include towards the end, and it was the only sequence we actually shot in Jakarta, most of the rest was shot in the bush and Kalimantan in Borneo where I found that some Indonesian artists had actually been going out and painting and photographing the fires from the very beginning and covering it in a very militant way. They were planning to have an exhibition and I said how soon are you going to have it because we were leaving in 3 days and they decided to have their launch party as it were and invited their guests and it was useful to me as it provided a tool for me to address some issues. It also shows how art can be involved. Mark was saying yesterday that there is a dearth of artists who are really engaging with ecological issues. Well, in a sense when it's actually in your face, artists can obviously get to grips with it, so we could play the next clip.

(Film clip shown) **awaiting details

What's quite interesting, talking about art in a general sense, is that when one's making a film one usually wants to use local music but the local diak music is, like local ethnic music very hippy happy and did not really have the gravitas and depth that I wanted and I just happened to be watching television in a hotel in Kalimantan when I heard this music being played and it was a German composer using local instruments, not necessarily from Borneo but local Indonesian instruments and I managed to contact him and he said that he'd been inspired by what had been happening to Indonesia and that had got this kind of Sturm Drang feeling in his music and so I asked whether I could use it and he said yes. It was one of those fortuitous bits of luck and I happened to be watching TV at the right time and I was able to use his and a local Indonesian's music for the film which people say was great composing but it wasn't, it was great luck.

Making films for audiences what is one trying to do? I think one has to try and dissuade oneself and, certainly one's younger researchers, from telling participants in foreign countries that we are going to change the world with the film that we're making. You don't. You can do very very mini Rachel Carson's but you are only one small pebble that's causing that ripple and it's something one has to come to terms with. So what can one do? Certainly, I've evolved in terms of doing environmental films and part of the way I've changed is how issues are considerably greyer and more complicated than we would want them to be. It is not a simple case of Rachel Carson almost alone against the big companies of bad guys/bad pesticides. Even with great issues, it's always much harder and one has a duty to reflect that and reflect the reality and to challenge our own perceptions here. There is a tendency in some respect I find with British audiences, particularly the environmentally committed to, in a sense, nearly self flagellate on issues. I was asked to do a film for the launch of BBC4 and we had a series on the great apes and my film was going to be on the immanent extinction of the great apes to the bush meat trade and, as a starting point, reading all the literature and Green Peace were doing very good investigatory stuff showing the relationship between the timber companies who are building these great roads into the forests and letting the poachers in and often feeding their own people on site with bush meat and chimpanzees and gorillas that there's a great emphasis on these European timber companies and us the consumer and our role, that is massively important but going out, and I went out with that objective by my money, my goal in the film was going to be nailing down that relationship between the European timber companies and us as consumers here. As it happened, the realities that I saw, the problems that I saw about why we possibly won't have great apes out there in any kind of wilderness in the next 20 years are much more complicated than that simple idea. Ideally, again what I've learnt

from making environmental films is that one tries to take the audience through one's own learning curve. I try in a 50 minute or an hour film to some extent to take them through the changes in perception that I went through and the challenges to my own preconceptions that I went through so I'm not going to show you the clips where we nailed the timber companies. I'll show you the clips which, to some extent, reflected the far greyer reality. You'll see towards the end of the next clip, a lady called Madam Solange who basically makes her living from cooking primates and serving them up to clients in restaurants and she is a woman of great dignity, with great fun and a great sense of humour. She has a different perception on our closest cousins, the chimpanzees, gorillas and other primates like monkeys than we do and this was something else I was having to come to terms with throughout the film. I'll show you this clip. First we see an auction and then we go on to Madam Solange.

Film clip from *Kings of the Jungle* 1998 (dir. Jeremy Bristow)

What was interesting was that many people watching the films took that first sequence where you see the nice housewives and the poacher's wife buying the meat and they want to take home the idea that 'Oh well, it's not their fault, there's no alternative'. But actually the issue of bush meat and the immanent extinction of the great apes in Africa is actually more complicated than that. It's that people there do not see the great apes as we see them. They see them as beasts that must be eaten and in the cities where there are alternatives, where this is meat, they're buying them and there what are driving the market and one has to say that, in a sense, and one can see from the customs here that meat is being imported here by African people. So that to some extent, and also talking to a lot of people and dealing with the issues out there, in a sense that was as much an issue as our complicity through buying the timber and it's very difficult for us to take this on because there's almost a sense of racialist element in dealing with this issue but it is an issue that must be dealt with in my view and it must be confronted and it's very difficult for well meaning people, liberal people to confront this problem which is to get Government officials, to get local people in villages to really want to defend and protect these animals, there would have to be a huge shift in terms of their attitude to animals that we regard from our culture with our security of meat that we buy in cellophane as something so rare and something so related to us. It was an issue that still isn't being addressed because many of our NGO's our Government don't want to directly deal with that, it has too many other connotations from a PC point of view, and yet it's just this sort of issue in terms of presenting to our audience in the developed world, we ought to be presenting these changes and it's my job to do that. I'm going to show you one more clip, later on in the film. My cameraman turned round to me and said 'Yes, now we're making television'.

Film clip from *Kings of the Jungle* 1998 (dir. Jeremy Bristow)

That project of course ran out of steam [referring to an aid project from the film], as these things do that are set up with great expectations, got ground down and has lost its financing, having boosted all the expectations of the villagers that, if they didn't shoot the gorillas they would eventually have tourists who would come in and pay and their village would prosper as a result and another development failure which was quite disillusioning. Joe Mellor who you saw there in the film, if you look him up on the websites you'll see he was a sort of hero, a great gorilla poacher then he saw the light and turned to saving the gorilla and was running the project. I became increasingly concerned as we were making the film that Joe wasn't quite that simple despite the fact that a couple of documentaries had already been made portraying him as this poacher turned game keeper. Towards the end of the film I asked him 'Well Joe, how do you see the gorillas?' and he said 'I'm sorry, I still see them as beasts that must be eaten. I do this work because you pay me to'. I have to say, after making the film I couldn't see it for another 3 months because I felt too depressed by the experience. But nevertheless, I think it's our job as film-makers to be able to portray these dilemmas and these problems even if, to some extent, we can be accused of being under-motivating because we don't really propose solutions in the film and that's one criticism of it except if you want to say you can't deal with everything in one particular film.

I'll now go on to the last completed film that I've done which again was an interesting film, as someone who is very interested in saving the environment, ((it)) is about prawn farming. ((…)) Waitrose sold and Tesco sold a particular prawn about whom there were all sorts of accusations and I went to have a look at what the environmental footprint of this company was, and what human rights abuses were linked to the product of prawns. Tom will play you the opening section of this film. (40 seconds.)

Film clip from *The Price of Prawns* 2004 (dir. Jeremy Bristow)

Quoting from *The Price of Prawns*: "This prawn comes from the cold waters of the North Atlantic, it's been produced with little environmental impact and no human rights abuses. This prawn comes from tropical shrimp farms. I wouldn't buy this shrimp or this prawn coming from Honduras where we have evidence of numerous human rights abuses and massive environmental disruption, huge areas of coastal mango forests have been cut down to provide the farm area where this prawn has been produced. Don't buy it, don't eat it and the supermarkets certainly shouldn't sell it".

This is what the director of the Environmental Justice Foundation, Steve Trent, a guy with a long history in environmental campaigning had to say. At the first interview before we'd actually started filming in

Honduras that's what he told us and produced all sorts of their research documents, etc. backed up by references to documents by scientists that backed them up in talking about the devastation that this prawn farming company was perpetrating. We went out to do the film and we came across something completely different actually. We found a company that was really extremely impressive in terms of the environmental consciousness it had in terms of what they are doing now and had been doing for the last 15 years or so. We found very little evidence of human rights abuse in any way – in fact none – and we found a company that was putting in water supplies, and paying for teachers and school books for the communities around it. Yet here was one of our respected environmental organisations in the UK telling us something completely different. The reality of this was that one never approaches companies with vested interests like this farming company with complete belief, you know they are going to present you with scientists – their own scientists – who are going to tell you all this stuff, and you know you're going to have to go back and check it out because there are so many things they can fox you with and it takes a long time to go to third parties to check out what they were saying, which was what we were doing. As we were slowly beginning to realise that actually the mangoes hadn't been chopped down and that talking about the role of women in development, 60% of their employees were women and this was having a huge impact in terms of the development, in terms of kids going to school, in terms of literacy, etc. that was being caused by the prawn farm companies in this particular area. I'm not talking about other areas of the world. As this was beginning to dawn on us, Steve Trent sent out 2 environmental investigators and I'll just play you this clip.

Film clip from *The Price of Prawns* 2004 (dir. Jeremy Bristow)

They found no evidence. In fact, everything they were being told was wrong. Their assumptions that there were pesticides there, in fact, I took our own pictures to various people including the Green Peace laboratories in Exeter who said that is just normal water that has been dropped 10m with plant matter in that if you drop it and you see it on the sea, and there is no evidence whatsoever that that would have pesticides in. The guys there were told if the fishermen went in and not the local fishermen, they would be shot. We went in just afterwards and found fishermen fishing on the other side where they're looking and they've been going there for 15 years and found plenty of fish and had never been harassed by the guards. Everything was entirely the opposite and yet this environmental organisation was going to publish this set of reports, they had The Guardian lined up for a front page headline, etc. about the prawns we're eating. The reason why I wanted to show you that is that, to some extent, if we have a role, we have to be challenging our own assumptions, challenging our own naiveties which I firmly believe in, and if we're going to win the war on

the environment, get it out there, get public consciousness, change governments, we've got to stick to the facts, we've got to be scientifically sure ourselves and miss-quoting, over-exaggerating like definitely linking Hurricane Katrina to global warning and saying 'It is the result of' actually undermines the cause a great deal and ultimately that's what we've got to do, which is not art, much of it is good balanced and honest scientific research. I'll move on.

Mark Nash. Thanks for very fascinating examples of your work and projects and a very cautionary tale at the end and I'm sure there'll be a lot of material there for discussion. I'm just going to move us on to our final presentation this morning by Timothy Collins who is an artist and inter-disciplinary academic interested in relationships between art, environment and planning and he's just moved to work at the University of Wolverhampton where he's charged with research and graduate programme development. Previously, he was working in the States as an artist research fellow in Pennsylvania I think which he's going to tell us more about. He is also here with his colleague and partner Reiko Goto and I'd like to also welcome her here as well and look forward to hearing what you've got to say. Thank you Tim.

Timothy Collins. Thank you very much. I'm very excited to be here today. First, before we get started, Reiko can you just stand up so that everybody sees who you are. Reiko and I have been working together for 12 years. We live and work together, we've been in a research facility for the last 8 and we've been in England 3 weeks. These are some imagines from some of the river dialogues we've been doing in Pittsburgh Pennsylvania regularly holding dialogues out on the river with citizens and decision makers - dialogues with artists and citizens and dialogues with artists from all over the world. You can see folks from platforms, Malcolm Miles in that picture. Newton Harris is dead centre, a colleague from Japan, another colleague from India who have all been working with us on various post-production issues in Pittsburgh Pennsylvania and I would argue that our work is about the art of asking questions, listening to answers and thinking beyond disciplines. It's ultimately about strategic knowledge: we do want to change the world. It's about platforms for discourse and it's also about a focus upon creative change. Our focus is a confluence on art ecology and planning. You've heard a little bit about who I am. Reiko and I have been working together on these projects for 8 or 9 years and other projects before that. She's a research fellow and she was a creative director in nature. I should say, in the background, you're seeing a 200 x 200ft mural on the wall on the of the Clairton coke works, the largest coke works in the United States which is all of 11 miles downstream from the point where Pittsburgh is located at the confluence of the Mananga Hill river, the Allegany where they create the Ohio. We work with a whole range of people, we've got a team of young artists and architects who have been working with us for years and, in turn,

employ, I've actually raised money to bring in a whole team of researchers and academics in science, planning, design as well as legal support in terms of policy experts and we bring all that information to the service of citizens on the question of post industrial public realm. Specifically, in this project, rivers as public space, so despite the claim that the Clayton coke works is dumping 25,500lbs of cyanide into the river per year according to an EPA record. They are also dumping 650 tons of particular into the air. Despite the claim of continuous improvement to the environment, we can question that through existing documentation. But I want to talk a little bit about art – I've been in a whole range of dialogues. I've been in a room down in Plymouth with my director of studies Malcolm Miles (I'm just finishing off a PhD with him) where there were people from different areas of the arts arguing about who had the right practise, who was changing the world, and it was basically a pissing match. We had people working from the position of lyrical expression, people who really wanted a role in society and wanted to use their creative tools, they wanted to bring their expression to issues of the public realm. There's nothing wrong with that. There were also people that were interested in a radical/critical approach. They wanted to stand outside of the system and take it to take it to task. Again, there's nothing wrong with that. There are also people in that room who were transformative action, by dialogue and again there's nothing wrong with that. It's going to take all of this to change the world because we're in a pretty horrible place. I think this has clearly been described by some of the previous speakers. This is the industrial error; this is the symbolic moment. This was the change, the transformation that emerged from the radical extraction of resources, public realm resources, coal was just something out of the ground that had no value. The guys who figured how to make things out of coal became millionaires. Just like the guys today who are figuring how to make things out of our genealogical heritage – they're going to be billionaires. Change is material – change is conceptual. But change is also symbolic. This is the symbolic issue that still drives Pittsburgh Pennsylvania today . The bottom line is where are the Pittsburgh steelers? The Pittsburgh steel industry has been down for 30 years. We haven't evolved out of that despite the collapse of 10 steel mills along the Mananga river, despite the collapse of 4 coke works, we still define ourselves as a steel town. What are some of the tactics that we can consider for a rust belt city? Well, one thing to think about is nature has returned without human investment. It's returned because we've ignored it so the question for us was how to insert the latent opportunity of nature into development concourse with the intent to change practises and shift benefits from those that have to those who do not. I would claim that as an artistic researcher in art practise and I would use symbols and ideas to actually try to bring change to material culture. I would argue that the industrial error of the past 150 years has been about the protection of

nature, the conserving of nature, putting it aside but it was designed by a philosophical relationship that was based in utility. It's based in use values. Post industrial conditions where we affect air, land and soil and the toxicants, the global climate have completely reconfigured. Nature and culture are no longer separate entities. Through avarice, culture has taken nature to such a point, that we are ultimately responsible and this is a major shift in the way in which we deal with the world, so I would argue that the post industrial condition is about restoration, it's about healing and it's about recognising the intrinsic values of all living and organic things. Why is it art? People challenge me from time to time and it's fine. Fundamentally because I say so. I have the exhibition and publication record to claim that position and I'm happy defending it and I want to thank Michaela because invitations to organisations like this help to authorise that claim! Secondly, because it's a free and open enquiry. It is only constrained by my chosen subjects and media and finally because it closes the loop between research and practice. It's applied research to benefit the disciplines and wherever possible, the social environment of context of my effort and focus. So I would argue that ((it)) is about affect, it's about media and material innovation. ((And it)) is about affect ((in terms of)) the social application of creativity. We can talk about how art engages the social world in a lot of different ways and we can argue about 6 ways from Tuesday! There's public art, there's community art, there's art activism. I'm interested in art and radical planning, the idea that are integrates critiques, it's an engagement of creative manipulations of systems. Symbols and content. Ultimately a dialogic process of creative enquiry and manifest intent. I'll talk specifically. We spent 5 years out on the rivers in a boat with teams of scientists, planners, designers, a whole range of people getting as much information as possible about the aquatic systems of Allegany County because nobody was paying attention. It's easy to intervene when there's little or no knowledge so I would argue that we're seeing changing faces of an industrial region. I assume that we're going to discover some of the same things in the Black Country of the West Midlands. We focus on river dialogues, where rivers and streams are public places and where public health demands new environmental monitoring and free flow of information. There's little or no information about environmental quality in places like Pittsburgh. You didn't need it in the past – your job was based on smelting coke, in filth, as long as the skies were dirty, people felt they had a job. So, our focus is defining nature, in post and public industrial space. We work with land use attorneys, with planners and urban designers, our work does get translated into computer mapping outputs. We do feel field studies with biologists, with botanists and stream biologists in the Menanga river, the Allegany river and the Ohio river. We develop tools for citizens that address issues of advocacy and equity and the top left woodland and interior packages and the top right per capita average

incomes, bottom left park areas, bottom right average tax assessed property areas and I'll bring your attention to this area right here which is an area of particular interest. You can see how well vegetated it is down here but you'll also notice the income impacts. This is also one of the more impoverished communities in Allegany County and, of course, we see less public space, less green forested cover. We also focus on tools for non-profit advocacy. We've identified groups of interested organisations that we can work with and we have been developing planning guides for recreational rivers. Basically developing river trails throughout the region. We work with citizens and use non profits to put together the planning tools and then they run them. They are developing extensive recreational systems up on the Allegany river and they're expecting to develop projects on the Mananga Hill river soon. We address riparian land. Reiko's expertise is mostly in land based eco systems on the top left, she's working with Jessie whose a botanist at the University of Pittsburgh and here on the bottom right, 6 miles outside of Pittsburgh (nobody can believe that's where this is!) Reiko's on an island in a silver maple forest. But we're here to talk about water, we're talking about streams and rivers. Noel Hefele has a recent article, a university graduate, he's also a hip hop artist, he's also a very capable painter, he's going to be developing work with us for an exhibition in October. But I'm going to talk about water, Three Rivers Second Nature, has an incredible amount of water quality information, so here you can see all the places where we've been out in boats continuously over the last 5 years taking water quality data. We're developing base line data on physical chemistry bio indicators, and pathogen indicator for toxins and I'll explain that in a moment. We are testing both the surface water of rivers as well as the surface water of streams so what the hell is water quality? In the previous films we saw that people thought they saw pollution so what you see and what you get is not always the same thing. So water quality is kind of a complex subject and I'll break it down into very simply into a) can it support life? So we're basically talking about the physical chemistry, what is the temperature, what is the PAH? What amount of dissolved oxygen do we have in the water? And that is the basic condition we need for life to occur in that particular body of water and that is physical chemistry. We can also ask who lives there? So we can look at benthic organisms, bottom dwelling bugs that through their continued residence and reproduction in that body of water can give it us an indication of long term health. In the first example we're taking a grab sample and you're taking it right at that moment, so you could have clean water then and dirty water 2 seconds later. With a bio assessment, you're talking about creatures that actually live in the stream over time and if you see a good diversity of creatures that tells you that there's probably good water quality there. You can look at insects at the bottom, you can also look at fish and other higher organisms. We can also look at pathogen indicators

which is basically shit and I'm not going to and I think it's really important to call it what it is. So basically we don't only have shit problems in third world countries, I think, given a little time, I could also find shit problems in the Black Country in the West Midlands, and I'm sure if you put a little bit of time and effort into it, I'm sure you'll still find it occurring places like London. Is it harmful to us is the main question. Does it actually affect our physical health when we have access to our urban, suburban and agricultural waterways? The next question is – is the harm long term to humans? In other words, are there toxicants lying in the mud that are going to affect human health, health of fisheries, and various mechanisms that bring them back into our bodies that we have to consider. In places like Pittsburgh, we haven't even begun to map toxicants, so water quality in western PA, hear no evil, speak no evil, the bottom line is there is no public information about water in Western Pennsylvania. The Allegany County Sanitary Authority in Allegany health department claim there is no water quality data, they claim that locally, they claim that to the Environmental Health Protection Agency. There are also under a legal consent by the United States Environmental Protection Agency who assumes that the we have a wet weather problem with sewage so it's important to think about water in all its manifestations, so when it rains, quite often urban water quality problems become much more severe. The Pennsylvania department of environmental protection which is our State based organisation and is supposed to be paying attention to this issue, does no field work, has no water quality data, accepts no outside quality data and as a result (and we had an attorney go in and talk to them about this) they assume there is no water quality problem! It's completely logical so the issues: what is water quality? The second issue: who collects water quality information? The third: who acts upon water quality information? Fourth: does the public have a right to know? Fifth: are public health standards valid? These are standards that are written into the laws of the United States yet they're not been applied in places like Pittsburgh, they're not being applied in my home state of Westward Island where the Puttoxer River flows right behind my mother's house. The next question is can citizens volunteers change the dynamic of obfuscation and control? Because as long as you control information, you have control over regulation and change and that is basically what's going on in Pittsburgh. So Gearmon Cole who is the spokesman for the Allegany County Health Department has said that there's no need to do this testing on an ongoing basis because it's going to tell us what we already know. It makes sense, so Gearmon what the hell do you know? He won't say as there's no data. So, I worked with a group on a project called 9 Mile Run in a new wetland, and there was sewage bubbling up in the middle of the wetland and it's a place where kids play every summer and I've got an e-mail from an Allegany County health department official who has said "the discharge is bubbling up into the wetland in the park". It smells like

sewage! Apparently, some entity had done an analysis – that would be my group of artists – on discharge finding faecal cola forms in the range of 5,000 cola forming units per 100ml which is borderline. It could or could not be sewage. Well, Gearmon if it's not sewage, what the hell is bubbling up that smells like sewage from underground? We've mapped all the water quality affects and what we started to fixate on is there's good attention on wet weather affects in our large scale rivers but there's little or no information about our small streams which are really accessible. For every mile of river front, we've got 20 miles of stream front and what we've begun to discover (and this pie chart gives you a sense of it) is that we have 32% of our streams are actually clean, suggests that you're welcome to swim in it if you want to. 200:1,000 is the standard they use for fishing and other recreational uses but not full body immersion, but if you're getting to 100,000 cfu per ml in this area, you know, you've got a real problem. This is in a major urban area of the United States. By comparison, and we can look at rivers in wet weather. 200 cfu per ml is about the standard and, basically, we're looking at some of the worst wet weather standards. Remember, Gearmon didn't think there was a problem with 5,000 cfu per ml was a problem in a public park yet these kind of wet weather numbers – 12/26, 14/27 - deserve the complete focus of the Allegany Health Department and we can compare that to wet weather standards on all 3 rivers and here we see numbers 5,547, 9,095, 82,273, this is akin to your toilet. This is a serious, dry weather water quality problem in an urban stream following through peoples' back yards. This just gives you a sense of it, again 200ml this is dry weather in a main stream rivers, we wouldn't swim in the rivers when we first started the project but once we understood the condition we started swimming regularly and recreational uses are increasingly crazy on the rivers. But none the less, there are spikes in different places, this just happens to be at a fishing dock where an African/American community recreates. This has been a condition that's been going on for years yet there's no action on it. The Mananga river streams, 14,840, 82,473, 443,694 and remember the regulatory standard is 200 and 1,000 so that's an increase that is staggering. Impact in rivers, we can see on the Allegany River, each of the rivers is different based on the type of geology that its draining from, this river is probably in better shape than the Mananga Hill river where we're seeing some significant impacts in terms of 1,000:100,000 cfu levels. The Ohio river is somewhat is somewhat similar to the Allegany but you're not any seeing significant impacts on the stretches we monitored. We can also look at the water shed providing an income and this is interesting. You can see the Mananga River it's a low income area, significantly low income area more than the Allegany and significantly more low income area than the Ohio yet this is where we've got our most significant water quality problems. So what we did, we developed a regional water quality data base that's been recognised by various groups including the

National Research Council and various other groups that have come through Pittsburgh. They keep trying to figure out why artists in a research group have water quality information! For me, it's an aesthetic question. Analysis revealed a lack of monitoring so we work to develop a low cost water quality protocol, we work with scientists to figure out how we can work with a group of seniors to be strategic as to how they obtain water quality information. We also hired an environmental attorney to examine the failures of quality regulation and enforcement and we've got a report due out early in October/November. We recommend that an autonomous regional water quality be created with a responsibility for monitoring the application of water quality data because the people that are supposed to be collecting water quality information are controlling that information to mitigate regulatory action.

Conflicts: our date indicates a significant divergence, the issues of human health and target initials of water health infrastructure, with ongoing monitoring and a rational approach of land management or development is required. Now I would argue that infrastructure is also an indication of a system failure. When we're talking about the first speaker's projects in the Third World, there's too much pressure on the eco systems. There's a whole range of tactics we can use to protect eco systems and to live healthy lives. If you get too many people in one place, they create huge impacts on water eco systems, huge impacts in terms of sewage, so, to simplify this, even a road, a hard paved surface is an indication of eco system failure. You get too many people walking down that path, it starts to erode, you have to make it hard, so it's important to think about these things. The other thing that's important is in Western Pennsylvania we're not ring fenced as you are by agriculture. We've gone from a really dense city of 300,000 people in 1950 and 1960 to a collapsed city of 100,000 people that no longer live in the city – they're sprawling all over the city and the development interest wants to drive infrastructure out to every single highway inter-pass so that they can still keep building houses and they can keep driving the sprawl and they can keep taking apart the agricultural and forest covers. So we conduct a whole range of dialogues – we have citizen expert dialogues, we have water quality data, we insist that it must available and accessible, it's all available on our web sites. We've got an agreement that they believe water monitoring alternatives need to exist. The ones that do exist are still largely ignored. Now it's interesting when you sit down and talk with local and state government interests, they'll tell you that the federal government should do the monitoring, that the federal government should regulate and do the enforcement and ultimately the federal government must pay for all the problems. In other words, our hands are clean, there's no reason for us to act locally on our own problems, somebody else has to come in and do it for us. There are realities of scale, whenever we're talking about artists' projects at these kinds of a scale and I

would argue that we're really close to failure when we're working at this scale. The larger the scale, the deeper the commitment. Artists are working at scale can affect ideas and value but they're not going to have a lot of impact on the material world. Artists need to consider both access and authority to be effective. Is the discourse dominated by vested interest? Absolutely it is and who are the allies in these kinds of projects? Now ultimately there's a range of tools out there. It's not about everybody sit there and be happy. We have to understand that are power dynamics and ((a lack of)) good analysis of these kind of questions. Jurgen Harbermas from the school gives us good ideas about the discourse ethics, how to come to consensual agreement, even when you're having extremely difficult discussions. These tools, from my point of view, require successive actions, they require wide social distribution and ultimately commitment over time to be effective. We have to create an ongoing discourse about how we're going to use these things. So the question is, why the hell should artists be doing this? Shouldn't somebody else be taking care of these things? Well, maybe so, maybe not, but there're not. Contemporary aesthetics is as much about what we experience as it is about what we understand. I would argue that human value is the sum of experience and relationship to perception and conceptual organisation. I would argue that people like Joseph Beuys, John Freeman (?) provide cogent arguments for limits on creativity, enquiry and advocacy and equity and applied only through aligned state capital investments and disciplines. Artists are relatively unbridled by discipline methods and the constraints of client based practises. Artists create spaces for new ideas to emerge. That is our value in culture. I would argue that the foundation knowledge in engineering is a foundation that's damaged and you'd better build on it if you want to contribute to knowledge. You move into humanities, it's a modern and stone foundation which is rebuilt from time to time and is chopped away at but is still relatively stable. You move into the arts the foundation of knowledge is dry stone and it's knocked down with some regularity. The studio for enquiry has development what Reiko calls the Encyclopaedia and it's really hard to communicate the encyclopaedia as you probably already realise at this point in my discussion. This is one of the maps that came out of a whole set of analysis where we were looking at intact urban eco systems and how intact are they? Well, they found bear shit in a forest 3 miles from downtown Pittsburgh, they're actually black bears running around in the forest just down from down town Pittsburgh, which is a sign of ecological value. Reiko and I and Noel Hefele have been working really hard to develop some outputs for a specific exhibition that we've help organise and I'm just going to flip through this stuff really quickly. This is actually Reiko's design to take some of our more complex information and try to breathe life into the idea of what is there? This is going to slip away unless somebody cares and this is Reiko's solution. Some of our web sites, this will be presented

as part of the groundwork exhibition and created by Grant Kestler from University of California in Santiago and we've great people coming in from all over the world to talk about what art, ecology and planning really means. A platform from London will be there, Part Fiction from Hamburg, ((?)) from Senegal, Ishi Ikeito from Japan. There's a whole range of people coming in and we're going to meet with them in October. There's a range of web site your welcome to take a look at. Reiko and I will be here all day and if anybody wants to talk, we're happy to talk with you. Thank you very much.

Panel discussion,

Opening to questions from the floor, chaired by Mark Nash.

Mark Nash. Thanks Tim. Now we've got a good half hour for debate and discussion. I think it would help if the 3 panel presenters could come up and sit with myself and it'll make it a little easier. Before we open it up to the floor, I don't know if there are any questions that occurred to the members of the panellists while you were listening to the other speakers. Is there anything that you want to address to each other before we ask other people to come in?

Jeremy Bristow. I'm slightly bemused, about the question of art and we've had from the RSA which I presume is the Royal Society of Arts talking about projects to do with water, which is great, but I don't see what the art relation is. And then Tim's asides, Reiko's last effort with those rivulets, I didn't see much art there. The question I'm asking myself is how this is related to art and ecology because Tim, despite your proclamations about being an artist, I'm still not sure. You were doing a great job on what you call activism, in research and mobilising people to get something done, but I didn't see – a lack of imagination on my part probably – but I couldn't get to grips with where you both were fitting in to, in a sense, art.

Mark Nash. Maybe, I'll just come in on the RSA side and then Tim can come back to you. What we were trying to do I think was to address the fact that often in these debates and discussions the arts community is rather disconnected from the science that is involved. We don't often understand really these processes sufficiently to then make informed comment or base the projects we're working on, on them, so it was partially my decision to focus and try and renew our kind of knowledge a little bit on issues of water and water resources and a number of the presentations did that admirably today and it came out also of the amazing presentation that David King made at our last conference and it was very clear that the majority of the audience had not actually really sat down and listened and thought about the issues of climate change from a scientific prospective despite all the

information that was around. When David King was telling them stuff which television and newspapers had been telling us for maybe 10 years but actually when it was presented in an accessible way, where people could have a dialogue about it, people were surprised so we thought that maybe we should keep that kind of work and then there was that information. Tim – and he'll answer you in more detail – is in some ways just picking up a whole trend of socially committed art where artists intervene in different ways where Tim himself is saying if another part of the State apparatus isn't doing it, then artists are actually quite mobile and able to come in and do this work and I was quite interested because a number of the groups that he mentioned in his ground works exhibition were also present in the last documentary I was involved in and so in the international art world space, there is this renewed focus and interest in groups doing what you might think of as non artistic, in that they are not necessarily producing objects to circulate but they are actually fulfilling an incredibly important social role but I'll hand you back to Tim to see if he has anything more to say.

Jonathan Carr-West. I think from an RSA prospective, we're actually the Royal Society for the Encouragement of Arts, Manufacture and Commence, ever since we were set up in 1754, our raison d'etre is to weave together all those different things, art, manufacture, commerce now we focus on the environment, on communities and on global citizenship which is where the work on water and sanitation in the developing world comes in. But which doesn't have a specific reference to art, no.

Timothy Collins. I can come back to it, the bottom line is we have been questioning whether it is art for what 150 years – the Impressionists, was it art? Marcel Duchamp – was it art? I don't give a shit to be perfectly honest with you, I don't care at this moment in time. You know, the whole modernist programme has ostensibly been set up as a critique of an increasingly rational culture and the avant-garde was set up as poetical and literal opposition to art to an increasing rational culture at the turn of the last century and over the last 80 or 90 years we have pursued that to its ultimate focal point. We've followed the Carthegian process, we've pursued Minimalism down to its finest points, we've had people clarify what painting was all about, it was colour in relationship to the canvas and nothing more, we've been there and in the pursuit of that finest understanding of what art might be, it's been totally recognised by the interests of capital and the distribution of the creative product and I would argue that the question and there's a whole range of philosophers who have come in – Reiko would remember the names better than I would – you know who've said 'we're at the end of art, we've closed out these questions, they're no longer interesting'. So I would argue that we're at a point where we've homogenised until it all tastes the same and we're at a point where we've got to diversify like crazy, we've got to open up the doors

and accept anything that rolls in and by the way, if my colour cult happens to invite us in, I can use that on my resume. I must be an artist because I say so. You know, Malcolm Miles says it's like arguing how many angels fit on the end of a pin. Again, it's not a question that, for me, has a lot of validity, my training is as a sculptor, my training is as an interdisciplinary practitioner, my PhD is going to be in art ecology and planning, yes I do have rational knowledge, yes I do understand how water ecosystems work and yes I use that as a creative tool of change because I would argue that is what art is all about. I'm a working class kid, I went to school, I thought I was going to be a marine fisheries scientist I discovered I have trouble with maths, I met a man who said you can do anything you want in the art department and I was like 'What the hell is he talking about, I've been making art all my life and that doesn't make any sense'. He lives up the street from my Mum's house, on the Pettoxa river in an old library and he still paints like crazy and Reiko and I spent time with him a 3 weeks ago before we came to England and he reminded me and it kind of took my breath away that 'you can do anything you want in the world of art' and Richard Frankel said that to me in 1978 and I believe it with all my heart today. I hope that helps.

Jeremy Bristow. I'm still having difficulties.

Mark Nash. If there's nothing else that's burning, then yes we've got a lot of questions now.

Question. Hello, I'm Deborah Harrison. I've been working on the interface between ecology and the arts for 15 years. I was originally an artist, then an environmental campaigner and now once more I'm an arts researcher. I was very interested in a comment last night about somehow this is a very new field – arts and ecology – and there're aren't many people working in it. Well, I'd just like to say that I've met an awful lot of artists actually on this interface and working with environmentalists and conservationists and many of them here in the South West. I've been working on a project where we've done a project on art on farms as part of the outcome from the foot and mouth crisis, we found 160 art on farms projects across the south west, that represents more than 500 artists who are working on different types of projects actually on farms. Many of them environmentally linked and previously I worked with Media Natura in London. They were inviting artists of many sorts to come in and help develop environmental campaigns and that was in the late 80's and early 90's. So I'm very excited that you've put on this event and I think it's very timely and topical but I do think if people looked beyond London outside white cube galleries, they would find an awful lot of people have been doing some amazing work on the ground, we just need to go and take a look at it.

Question. Hello, my name's Vernie Hume and I just wanted to comment but also ask questions about the issues raised by all 3 of you basically and also by the film about Rachel Carson which is about the validity and perception of scholarship in this argument in terms of the rubbishing of people's knowledge or experience or undermining their professionalism by one side or another equally by the reliance on established media in seeking the same opinions they always have. I know if you watch a lot of scientific programmes at the moment in this country, you will get the same speakers about the environment from Imperial College because the media has a good relationship with them and that's who they go to and rely on. Personally, I'm involved in indigenous people and their human rights in that way and indigenous people are at the forefront of the destruction of the environment because of the land they inhabit and because of the wealth of resources. I think it would be more important from an arts and ecology point of view if different opinions were sought and the effort was made. I know that your film about Kalimantan, that's an indigenous area as well, and also in India – Gujarat - as well, there are a lot of indigenous communities around the world who have this knowledge and they've developed this knowledge over thousands and thousands of years and through a relationship with the environment. That knowledge is either ignored by the mainstream media, unknown by the mainstream media perhaps or exploited for its own ends without due credit being given to those communities and that to me is an area that is being development at the moment by indigenous people and artists working with those people to actually look at that knowledge in a way that mainstream society could actually learn from and I suppose what would be interesting is how artists from the West who have experience here of getting the point across in this country, can look at what's happening at grass roots levels in different communities and how they can support some of those movements and maybe ignoring the value of them.

Question. Hello, my name is Charlotte Bernstein. I'm an artist based in Hertfordshire. Really, I've just got some thoughts on last night and what I've heard today. I think the thing that struck me the most was there's a lot of non verbal communication going on and it seems that the films have been very narrative-based I can understand how some of the research can be integral but I wonder if that contributes to people's fatigue and is perhaps why there's not a great deal of people here or people in general hear a lot about things and they don't really take any action about them. Also, it kind of relates to what I do as I've been working with other artists trying to get a project off the ground called 'The Live Art Garden Project' dealing with live art in open spaces. We are kind of stumped at the moment, not that we necessarily believe that we should wait around for funding, but we can't get any funding. We're spending so much time writing papers (I'm not saying there's not an art to critical writing) but we seem to be

doing a lot of talking and writing papers so we can get some funding so that we can carry on when our work is really about the non verbal and a lot of the best things we do are developed when we're not talking and I was just wondering how artists can develop when that is the situation?

Mark Nash. Thank you. Maybe we can take a couple more contributions and then comment.

Question. Well there is somebody from Greenpeace here today and that's me – I'm Martin Atkin. I'm a television producer with Greenpeace International. There's a lot of points that I would like to make but the thing I'm interested to hear from you guys is your thoughts on the issue of integrity especially in the world of film making because you Jeremy touched on the need to have solid science and the need to have facts and the need not to exaggerate the environmental problems, all of which I would agree with but I think there is another side to that coin which is on the part of the film makers that it is incumbent on you to be honest and although I know you weren't involved in the making of *Blue Planet* for instance but that series was incredibly dishonest in that it portrayed the marine environment as being pristine and in no way damaged for the most part and it was a multi-million pound series which was completely misleading. So I'd be interested to hear your take on that.

Question. Hello, it wasn't a question so much as I was picking up on the question of the art thing. I see my involvement in art research being involved in 2 things in particular they can be very invisible particularly these days with contemporary art practice which is socially engaged art practise which is what I think is happening a lot these days, particularly in the U.K. and also in other places and 2 areas I am involved in, one is kind of exploration and opening up conversations in the spaces which Tim has been talking about and the other is a kind of involvement in the representation of all of those things so how environmental or ecological issues are represented in film which is why I see this as being about film ecology and huge passion and responsibility in what part we play in how we represent things. These are the two areas that I see artists involved in, almost invisibly involved in but I would consider your presentation as being very interesting and informative in that way.

Mark Nash. Any points anyone wants to come back to?

Jonathan Carr-West. Yes, a couple of things that I would pick up on. On the question of newness, is this new? Well, no but nothing ever is and I think socially engaged art is as old as art itself and the engagement of art with ecological issues is also very ancient but that's not to say that one shouldn't give constant pushes and reinvigorations to such things. I wanted to come back to the question of science and the media and balance and all those things. And of course it is

important to have balance in the way that science is reported but I think we shouldn't be too depressed about this issue within this environmental context or rather I think we should be but for different reasons. I mean obviously science is never definite and one of the interesting things about the Rachel Carson documentary was that it harked back to this nice sort of time when, you know, - can the scientific argument be won – one person will be right and one person will be wrong. It's just a question of finding out which and then everything will be clear and, of course, science is not and has never been like that. Yet I think that to some extent there is a remarkable degree of consensus around the science issues like climate change. One of the last conferences we had at the RSA we had David King giving this searing presentation about the dangers of climate change and what was going to happen and the rapidity with which we are reaching the point of no return in terms of carbon concentration and in the atmosphere and the impact of that on the ice caps. Now David King is the government's chief scientist so I think we can often get locked in – this stuff is out there, it's well known - the scientific establishment is by and large on message environmentally, that's not the reason why things don't change and so I think on the one level it's encouraging that the science is good and community is very much aligned with the science community in many ways. I also think it's depressing because there are powerful counter forces that work against us so we've moved on beyond that Rachel Carson point of view that if you can get the science right, everything will align behind that. I thought the question of indigenous people is good and I think one of the really fascinating things about Jeremy's film was to bring out some of the tensions and political difficulties around that. Yes, indigenous people are the ones having their forest destroyed but they are also the people who are eating the bush meat and those sorts of tensions are very rarely aired. It's very difficult, particularly in the sense of ownership. In the Indonesian film it was 'this was their forest and it's been taken away' and yet that sort of ownership tends to be more difficult when it's their forest and they're killing the gorillas in it. How we negotiate those tensions is I think incredibly interesting. The final point someone talked about is the integrity of film-makers. I think that is an interesting question. I wouldn't for one second suggest that artists don't have integrity but they don't have accountability and that's something we need to be quite cautious about when we talk about arts and ecology that artists don't answer to people.

Question. I just wanted to come back on the last thing you said. I thought that the people who were eating the gorillas were the indigenous people, they lived in the forest but they didn't appear as indigenous. Isn't that correct in fact?

Jeremy Bristow. No the people in the village where we did a lot of our filming where you see that episode where the gorillas have eaten the

plants, they are, I mean there're two people that live there. There are the Bantu people, which they were, and then there are the Pigmy's who live next door and, to some extent, are in near slavery to the Bantu. But in effect they're indigenous people, they're people who have lived there certainly for the last 2 or 3,000 years.

Same questioner. I did read a book by Philip Turnbull about the forest pigmy's because usually indigenous people are able to live with their environment in a way where they're able to co-exist and to me that seems also to be the central theme that underlies everything is that human's ability to co-exist with the rest of the natural environment.

Jeremy Bristow. The forest there is big enough to take both the Bantu and the Pigmy's. You are right in that the Bantu are more the cultivators and the Pigmy's lived in virtually absolute harmony with their environment but that the Bantu's themselves weren't in large enough numbers to do much damage. It's only when German coffee growers came into that area that they began to change it really. So I would say to all intense and purposes, the Bantu there can be regarded as harmless to the environment there.

Timothy Collins. Is it a sense that indigenous people live in harmony, a kind of a modernist projection on a complex social ecological question?

Jeremy Bristow. Well yes, if you want to go into this entirely by saying indigenous people *do* live entirely in harmony with their environment, in certain cases they do but we have evidence that, you know, in the case of the aborigine in Australia and were they indigenous when they arrived? It's difficult, they arrived 50,000 years ago over the next 30,000 they burnt down a lot of the land and the animals that survived were those that could survive fire and a whole range of species has disappeared as a result of the indigenous people. The American Indians moved in and loads of evidence that they also used what materials they could to control their environment and quite possibly, we don't know, but they certainly altered the environment and might be – and the scientists are out on this – but might have been the cause of the extinction of a whole range of very large mammals. So my own experience is, no, if indigenous people are given the tools to exploit the environment, they often do and in a negative way so I think is an over naïve myth to say that indigenous people always live in harmony with their environment anyway.

Timothy Collins. I've been doing a little bit of reading – there are very scientific groups who are starting to look at the environment from an urban scientific prospective and they are actually looking to archaeology and anthropology to look into the whole native occupation of the United States and you know what they are discovering is that the urban centres in North America were actually more densely populated than the same urban centres here in Europe.

Prior to contact, there are several papers to suggest that over a third of land that's in agricultural production today in the North East mid plant corridor would have been in some kind of agricultural management prior to the European migration to the USA and Reiko and I were down in Charlottesville North Carolina and we got talking to scientists there who had discovered buffalo bones where they can use DNA evidence to identify it from a herd that would have been on the other side of the Mississippi river and there would have been very little reason for those buffalo to come to a place like North Carolina so the question is how are these things migrating, so I think the assumption is anybody has done it better than us in the past. It's a big question.

Mark Nash. Look at Easter Island where the local people destroyed their whole environment there. They wiped out every tree and regressed.

Timothy Collins. It's certainly population impacts.

Question. My question really relates to the issue of broadcasting. We have debates on broadcasting and we're now firmly in a multi channel environment, film makers like you Jeremy and others want to reach as wide an audience as possible and I was wondering in a multi channel environment with the analogue to switch off and so on, are you presented with a greater opportunity to reach a wider audience or are you constricted given the fact that audiences might become more fragmented because of the great deal of choice which is going to be open to them?

Jeremy Bristow. Can I say both – more opportunity and more fragmented. The environment programmes I used to do for BBC1 and BBC2 now go out on BBC4 capturing an audience from 3, 4 and 5 million to 50,000, OK they are repeated a bit but there's that order of reduction. To take on Martin's point, about the *Blue Planet*, you are right up to a point. I mean they did produce a programme called *Trouble* that went out on BBC2 at the same time. It was one programme with some of the producers from *The Blue Planet*. Was it good enough? No in my view, they didn't really reference to it. It was off on its own and very few people watched it. It got a reasonable audience but we could go into that issue more. There's more ghetto-isation. My fear is that, OK, I can make films that challenge the environment to an environmentally interested community and these are the films I make and can get to them. Can I make films where, hopefully viewers who never thought about environmental issues before happen to switch on, get engaged and get motivated - the chances for that are getting less because of this fragmentation with all these channels. All that exists to some extent is that David Attenborough and the *Blue Planet* guide help create a sense of love of nature at least even if, to some extent, they are helping portray a picture that doesn't reflect on the state of the oceans which we all

know are in a desperate situation but maybe we are aware enough most of us to know that the oceans are in deep trouble and maybe we are still happy to go and enjoy a film which shows how wonderful these oceans can be. I'm not saying that's the official response on behalf of the BBC but that's probably one defence that got. In my personal view and don't quote me BBC, it's not good enough but that is a defence that can be put forward for it.

Question. I'm John Michael Grieves, I'm an artist and I'm from a maths background. I'd like to link something that Jeremy – well all of you really – said about the need for factual science. The word science gets over used. Lots of people don't understand and that includes "scientists". Repeatedly through history, "scientists" have shown a forward blindness and a backward blindness again and again. One definition of science is this 'That which is proved by experiment until proven otherwise". Now, many scientists stop at 'that which is proved by experiment' and I think it's crucial that everyone understands 'until that proven otherwise' factor. I will give you four examples. Before we went to the moon, scientists said 'it's impossible to fly to the moon'. In the case of the Rachel Carson film, we heard scientists talking about pesticides being safe and in the case of nuclear physics, we were told in the early part of the century that or last century now, that nuclear physics was safe and we were also told that cigarette smoking was good for you. Scientists need to be open to change. They need the ability to be balanced which you've talked about but they need this foresight to look back and forwards. I have a friend who is a scientist who works with GM products and he tells me upfront GM foods are safe but the fact that he cannot see that scientists in the past have been blind, he himself is blind. Now I'm not saying that GM foods are safe or not safe. I'm just saying that if scientists don't know what science is then we are going to lose the art of science. My point is that it might actually take an artist to tell a scientist.

Mark Nash. I think that's fair although I do think one could apply the remarks that Tim was making earlier on about art also to science. There are big debates as to what science is and this has changed over the years and centuries. I was struck when Jonathan was talking about the idea that in a way we've come back to a position which is close to the 1930's when scientists were much more politically committed and much more outspoken and there were some who were members of the Communist Party and taking quite overt socialist perspectives and yet at the same time doing what was regarded as good science but they were advocates in a way at that time and I think we may be coming back to that kind of position more but I think it's very misleading to think that there is something on science that's a kind of monolith, it's actually a very complex field just as it is in the arts.

We're coming to the end of our allotted time so I'm wondering if any of you here have any further thoughts.

Jeremy Bristow. I think it was Charlotte who asked whether we were fatiguing people, tiring them out with too much verbiage. There's something in that and I think there is a role for art in the non-verbal side of it. I get tired, I listen to the Today programme every morning because I feel I ought to know but I feel I'm just bombarded with facts and I need something inspiring and I don't need to hear it through words so yes I think that's a really good point.

Timothy Collins. The whole area of art and the environment has a long history. At an environmental conference 4 years ago, I was with a whole lot of colleagues one night and they were telling me about the amazing 20 year programme of environmental history and where the hotbeds of knowledge where. They said 'so Tim what do you do?' and I said 'well I'm in the …….' And they said 'What's that?' And I said 'well it's an area with a 30 year history and we've got Herman Pregon that's been working in Germany and other places in Europe. We've got Itshi Ikeito in Japan, you know I can go on and on. There's lots of people that have been working in this area fleshing out what it means and experimenting with the scope and scale method and intent of art and ecology. It's not new. It shouldn't rock your boat. It does challenge what we popularly understand as art. In the USA most people think if it's not a painting or a sculpture that goes over the couch it's not art. Which tells us more about the poverty of art in the USA where we spend the sum total of 18 cents per person on art whereas over here, we're spending close to $18 per person on art according to a recent article in the US news, so the investment in culture will take us places that we haven't been before and it's taking us places in terms of perception, conception and through experience it takes us to new values. I think that's important. That's why its art from my point of view.

Jonathan Carr-West. I think the point about the provisional view of science is well made but I have to say that most scientists I've come across are well aware of that and it's actually that the rest of us need to get to grips with more and I think that's particularly true with the environmental movement. Science isn't going to prove that we should do anything – what we should do about global warming, carbon emissions – because at the end of the day, science doesn't do values. Science can tell us that the environment is changing but it cannot tell us whether and why we should care about that. Art perhaps can.

Mark Nash. I wanted to close as we want to start promptly at 2pm with a full schedule. It's a small enough group so there's an opportunity to meet over lunch which has been provided at the other end of the hall so unless Tim you had one final word you wanted to ((pause)) no, that's good.

Jeremy Bristow. Can I just say that talking about the history of art and ecology being the oldest – in Chauvet I think in Southern France there

are 32m cave drawings of bison and elk. You know, it's got a bit of a history to it!

Mark Nash. Thanks everybody. Applause.

Afternoon session

Questions of Eco-Cinema.

Mark Nash. We have quite a full afternoon of film presentation then two papers and a discussion, followed by screening at the IMax and a reception together with the Wildscreen communicate people so I'll try to keep to the schedule. It is my great pleasure to introduce Andrej Zdravič who is an independent film and sound artist born in Ljubljana, Slovenia. When he was born there it was Yugoslavia and he studied experimental film and sound at SUNY at Buffalo in the United States and spent a lot of his adult life working and making films in the States before returning to Slovenia in the '90's. Andrej will say a little bit more about the project and then we are going to see the whole of his film *Riverglass: A River Ballet in Four Seasons*. Thank you.

Andrej Zdravič. Hello, thank you very much for being here and thank you for inviting me to the RSA and Michaela Crimmin and Mark Nash. It is an honour to be here and I find this symposium very fascinating for many reasons. I think this sort of event, I have a feeling it will grow to a larger degree in the years to come because there a very important issues and the whole media influence on Society and how we are conveying our messages and what we are doing with films. Fascinating issues were raised this morning through the speeches we heard, namely the saturation by media, our ability to perceive new things, the role of the Arts and so forth but I think I'll keep my introduction very short now to take a breather after lunch and just watch the film first. Then be back here, we'll have 10 minutes or say and we can say a few more words and talk.

Briefly, *Riverglass* came about from my fascination with natural forces ever since I was a child. I guess I was a lucky child to be growing up in an environment which was very natural and in a pristine state. I also didn't go to any pre-school or anything so I was just observing things up until I was about six and a half and I think that has a lot to do with the way I work. When I am doing these explorations of the world, I read a great deal, I study like in the case of water, I study scientific texts. I mean I spent at least 15 years reading books on water and the physics and I find those physical data very poetic but when I go and actually start filming, I try to throw everything away and my whole approach is to immerse myself in the subject I'm studying and let it speak to me and so I try to efface my knowledge and my ego and I'm just an instrument who is handling this camera and trying to transmit so this is the challenge that I go through with every film I do – it is to totally immerse myself in what I'm looking at and so I don't use any commentary, no words, no people and even I try to stay away from music in the traditional sense because I feel that music sometimes it

works beautifully but more often than not it tends to take away from your freedom to experience the film on your own terms. So therefore I am basing the sound more on natural recordings of sound and then I combine these sounds and make collages and some kind of music emerges. So the whole thing is just to immerse yourself and I often say to people 'try to see my film as you would listen to a piece of music in a theatre hall'. Meaning that you just sit there and listen and don't expect anything to be told, what to think, just experience it as music. Then see what happens. So this is *Riverglass*. It took me 5 years to make this film. It is a completely independent production. I do what I please to do. It does take me a long time to realise those things for that reason. Like someone said today, more often than before, artists spend a long time writing proposals, etc. and I can tell you I can empathise with that but, in the end, it is worth it because that's the meaning of one's own life is to explore and learn, so anyhow, thank you again, let's look at *Riverglass* and then we'll go from there. Thanks.

***Riverglass: A River Ballet in Four Seasons*, 1994, Andrej Zdravič.**

Mark Nash. Thank you very much. I'll start the questions because I have so many questions and then we'll let people come up with their own.

I just wanted to ask you Andrej about the whole procedure of making the film. There was the equipment that you designed to protect the camera, so to speak and then whether the four seasons that we see represented in the film, whether that's strictly adhered to or whether it is actually poetically moved that is to say whether you moved between a series of locations throughout the seasons and then you edited it to follow the river in the four seasons. Then, of course, I have other questions which other people may have, one about the biology of the river such as the relatively few fish that we saw for example, and maybe a few thoughts or comments about how you set about making the film and putting it together over that 5 year period.

Andrej Zdravič. Well, firstly, about the seasons. It was shot randomly, you know, and the red line for me for this movie was that it is clear, it's very simple, that was the fascination the fact that you can walk around up to here deep in drinkable water. I mean I was pretty amazed by it and for years my father purchased an old house in this alpine valley in Slovenia so for many years I have fantasised about this film and how do it and so forth. I did some tests with a plastic bag and a Super 8 film camera a long time ago and so then when I actually started, it was just a process of going out and searching and I didn't even know how I would edit the film. The present form resulted from editing, just from studying the material but the stuff that was shot in the winter section was shot in the winter, the spring, obviously the thawing of the snow and from the sight of the trees it was early spring so summer is a bit of a grey area but in a way you can see that the river doesn't change

much. In the Fall you have milky water sometimes because it's full of sediment, what do you call it, limestone, so sometimes it gets milky and that happens basically in the Fall storms so the material is pretty much from those seasons but that is how the structure developed along the way. The filming – as I said I made many tests and I thought 'that will be great' you know, then actually how to do it, 10 years later I finally thought this is the now the right time to do it and at first I got a wet suit and I went in the river with this camera. I mean I bought a good housing, an aluminium housing and, as you see it was shot with modest equipment. It was a camera but, nevertheless, this housing was fine but I wasn't fine in the river. I mean I was bounced around in the river. It is a small river but it is torrential, it's quite rapid at times and you just sort of out of control you know. You don't see what you are doing and I realised it was the wrong way and then it occurred to me that how about if I put this housing on a stick and so then it took a lot of research. Also I must say that I researched even before I started what equipment I would use. I considered film also 16 and all kinds of things. So I then designed this ball with a cable going to the surface and I had a helmet like people who do fencing and I stuck a little monitor on the helmet in front of my face and I had this cable coming up and the ball was great. It was made out of aluminium tubing that they use for music stands and then some people machined some parts so that it was flexible, etc. It was collapsible so I could take it anywhere. It was lightweight but it enabled me to jam the camera against a rock or hold it down. So then I changed the method and I had fisherman's pants up to here and I was standing in water. It was a discovery process. At first I thought I would film also partially above water and then after I started under water, you know, it was so fascinating because you can see through the water that 'ah that will be interesting' you know but until you stick it in there, you don't see the little stones dancing whatever and it was just fantastic. You never know what treasure you would find here or there and I sort of gave up the idea of shooting above the water except that for the last shot stayed because it's kind of banal you know because many films have been made about this river before and anyway, I was just so excited about the underwater, I mean, above and below, so that's how the technology evolved. But the technology part is important – I start definitely with a vision with a feeling of what I want to do and there is a thread like I said, the line, but I always then think 'How can I do this, how can I do this differently?' so the technology has big part in it, how and what you do. Definitely, yes.

Question. Hello. The ice sequence – could you talk a little bit more about the sound or is it a secret how you gathered the sound?

Andrej Zdravič. No, it's not a secret. That sound was done with a little water flute. In Slovenia, one of the crafts is there are little flutes that you put water in and then you blow, so you blow through the water.

Then I sampled that. I slowed it down. I did some processing to slow it down, change the pitch, etc. so that was that wallowing sound and then some ice crack.

Same questioner. You seemed to have a child at the end.

Andrej Zdravič. Oh, do you mean at the end, the last shot? That was a fisherman. I mean I knew the fisherman was there, but it didn't bother me so I left that shot.

Same questioner. Did I hear child's laughter?

Andrej Zdravič. Yes, the child's laughter, that was a little reference to me as a child because we used to take vacations in this valley when I was 5 years old and I think, in a way, I was re-living my childhood during this film. It was like a children's view of things. I was amazed by this and that.

Same questioner. Were there trout?

Andrej Zdravič. Yes, there were trout. These are called rainbow, no, there is a special trout, it's a whole other story. There was a film made about that, it is being replaced by other species now they are trying to save it. Thank you.

Mark Nash. How much of the sound was natural? Was any of the sound sync sound? Any on location?

Andrej Zdravič. No it was all reconstructed subsequently. I went to record sounds in afterwards, apart from filming, so you know any given section has maybe 5 or 6 layers of river sound to make it thicker and whatever. Although the stones bouncing on the housing, that was picked up by the mike in the camera in the housing but, of course, that picks up also the noise of the camera but now I was able to get out the noise and just keep the clinking sound.

Question. I'm interested in your title *Riverglass* and I was wondering partly, when I was a child and first discovering that if you float up under water, you can see yourself reflected back and that was the first thing that you can see in the film which I thought was lovely to see the reflection of the river bed on the river glass. Again, something that is difficult to capture and you mentioned it, about recording the sound on the housing, is how to record underwater sound clearly because some of the sound seemed to have been recorded above the river as opposed to below, but was there a way that you could overcome that or record the underwater sound itself?

Andrej Zdravič. You can. There are so called hydrophones, microphones that you can use in the water and then there are home made solutions where people take a condom and put it on the mike and put the mike in the water. But I didn't find that sound so interesting in that case because it's just basically water coming into the mike and just the pressure of the water. Of course, you wouldn't hear subtle

things like bubbles so that wasn't satisfactory, so I just decided to just do it all above.

Timothy Collins. I'd be just curious to know, you dedicate this film to your mother, I am aware of a book called 'Water and Sexuality' which talks about the amniotic sea and it's written by the man who pioneered water births. Are there cultural references that are important to you? Did you dedicate it to your mother before you started it, or during, I'm just curious about the evolution of the relationship, you know, water and family and birth.

Andrej Zdravič. Well, OK all those connotations are deeply seated in us and we are born in this amniotic fluid, this water, but the dedication has nothing to do with that or thinking about our providence, etc. but it has to do with the fact that, my mother was a big supporter of my work and that was very important because when you do things like this, especially for 30 years prior to that, with no money, etc. they could have said 'Why don't you go out and get a job and try to make a living?' She was supportive because she was an artist herself and musician. But I dedicated the film to her because she passed away when I was editing it and the day she passed away, that morning, I was playing her bird sounds on the computer, she loved it, so it was simply that, because she would have loved to see that and she gave me so much. And, of course, you can say that the river is the mother, the river bed the earth, so that's OK too.

Mark Nash.

Thank you very much Andrej. (Applause)

We'll just take a very short break to get set up for the next session with Paula and David. (Break)

So, we'll press on and come back and talk a little bit more with Andrej in a final round up discussion. So, it's my great pleasure now to introduce David Ingram who is lecturer in film studies at Brunel University in London and he is author of 'Green Screen: Environmentalism and Hollywood Cinema' and he is also a member of the Association of the Study of Literature and the Environment and also co-editor of Green Letters which he was telling me over lunchtime, Paula is also a member of, as was Scott McDonald who leans towards an Eco-Cinema which is very important for us. So I'll introduce David who can say more about his project of environmentalism and the Hollywood cinema. David.

David Ingram. Thank you. Just a mention of ASLE – the Association for the Study of Literature and Environment – it's been going for about 14 years, mainly literary scholars, studying literature, nature writing and environmental writing but also people like Paula and myself do stuff on film and other arts. There is a UK branch too, called ASLE UK so if you look on the web site and, as I say, we're trying to encourage people to get interested in what we are doing now so I'd like to just mention that.

OK, I feel what I'm going to do is slightly crass after what we've just seen but I'm going to be looking at Hollywood movies, in particular the movie *The Day After Tomorrow* and just try to generalise about the way Hollywood deals with environmental issues. So I want to look at two aspects of that, one the way in which Hollywood can be interpreted in two ways – as realism and as melodrama – and I think what we find with this movie is that the audience receive this movie in both these different ways. I also want to, following on from that, look at the issues of audience reception and what we've been talking about so far in this conference, assumes certain things about the way audiences watch films, TV programmes in relation to issues of public awareness of environmental issues. So I'm going to argue I think, looking at this movie *The Day After Tomorrow* that the meaning of the movie itself seems to me to be rather ambiguous and open to different interpretations so even though it's a Hollywood movie, which I guess is trying to be accessible and simple in its meanings, it can actually be interpreted in different ways and if we look, as I hope to do at some of the reception of the movie by different environmental groups, e.g. different aspects, different parts of the audience if you like. Again, the audience perceived the movie in different ways too, so the idea of audience reception I would argue is something that is complex and not necessarily a uniform experience.

OK, so the plot of the movie begins from the scientifically plausible premise that global warming caused by human made pollution has melted the arctic ice cap causing the North Atlantic current to switch off and consequently the climate in the Northern hemisphere to cool down. Now, as is obvious to anyone who's seen the movie, this realistically plausible premise is pushed into melodramatic excess, so the movie, as a disaster movie, can dwell on a series of spectacular weather disasters –we see tornadoes destroying Los Angeles, we see giant hail storms in Tokyo, deep snow in India, an ice sheet covering Scotland and a tidal wave that floods Manhattan. The narrative involves Jack Hall, a government paleo-climatologist, played by Dennis Quaid who embarks on a heroic mission which involves him walking in sub-zero temperatures from north of Philadelphia to the New York public library to rescue his 17 year old son Sam who was sheltering there. So what I want to do is play the last few minutes of the movie so that we get a sense of how all those plot issues resolve themselves.

Clip from *The Day After Tomorrow*, 2004, dir. Roland Emmerich.

Ok thank you. Meanwhile, in the real world we've seen at this conference, environmental problems such as global warming, ozone pollution, industrial pollution, you name it. They're usually slow to develop, not amenable to fast solutions and are often caused by factors both invisible and complex. None of these facts fit easily into the commercial formulae of Hollywood or mainstream narratives like *The Day After Tomorrow*, which favour human interest stories in which

individual protagonists undergo a moral transformation or they resolve their problems through heroic actions in the final act. Now I'm going to argue that mainstream movies like this can be placed on a continuum between realism on the one hand and melodrama on the other and that audiences/film spectators read the movies in either or both of those ways. When interpreted in terms of realism, this film violates consensus notions of plausibility mainly be accelerating the time frame within which the effects of climate change take place. Indeed the movie is packed with events which are highly implausible from a scientific point of view and I could list any number of those. Air temperatures are so cold that people, buildings and helicopters all freeze instantaneously. The group of people sheltering in a New York public library survive by burning books in a fireplace, even though this would not be enough to counteract such extreme temperatures outside. If the temperature is really as low as this, Jack and his friend Mason would not survive to walk from Philadelphia to New York or certainly would not do it in the three days as depicted in this movie. There are lots of other implausibility's as reviewers took great pleasure in pointing out in this film. So concerning its basis in scientific knowledge, the film was widely seen by its critics as being a failure in terms of realism. This way of interpreting the film was central in Patrick Michael's of the Cato Institute for example. One of the so called 'contrarian scientists' who still rejects the theory of human created climate change. This company is not coincidentally funded by an oil company. Michael's pointed out that the scientific flaws in the movie should be something to be criticised for and it damned Hollywood for irresponsibly playing into the hands of liberal environmentalists by exaggerating the threat of global warning. For their part, many of the movie going environmentalists found the exaggerations in terms of science less important than what they saw it's more realistic portrayal of the American government's denial of the scientific evidence for global warming. As former Vice President Al Gore put it 'There are two sets of fictions to deal with: one is the movie and the other is the Bush administration and presentation of global warming. Al Gore joined with liberal advocacy organisation MoveOn.org who used the movie's release as an opportunity to organise a national advocacy campaign on climate change. Senators John McCane and Joseph Lieberman also used the movie as a chance for re-introduction of their climate stewardship act in Congress. Greenpeace on its web site summed up its response to the movie with the words 'Fear is Justified'. All of these groups saw the movie in terms of realism of portrayal of the American government policy and appropriated its meanings to further their causes. So I think that act of appropriation by these groups is I think very important when we're thinking of audiences reaction to these films. Now a second way, as I said, to interpret a movie like this through drama. As Marshall McCluan suggested clichés can be what he called 'probes' and archetypes of a culture. But what are the

ideological implications of presenting environmental risks and melodrama. In *The Day After Tomorrow* I would argue that Hollywood has made environment apocalypse perversely attractive. The environmentalist Paul Hawkin writes that the concept of Doomsday 'has always had a perverse appeal, waking us from our humdrum existence to the allure of a future harrowing drama'. People may be emotionally attracted to apocalypse like Steven O'Learly in his book through a desire for consummation, narrative closure or absolute knowledge. O'Learly argues that apocalyptic traditions appeal to people because they are fundamentally about community building and give the opportunity for human individuals and collectivities to "Constitute their identities through shared mystic narratives that confront the problem of evil in time and history." In this film, unlike in Roland Emmerich's previous movies *Independence Day* and *Godzilla* antagonist is not evil personified as an alien from outer space or a monstrous lizard but is the more impersonal force of the earth itself. That's what we might call a natural disaster movie it works on a stark contrast between nature and civilisation. I would argue that it invites a kind of dual identification on the part of the film goer. In Hollywood terms 'we root for both nature and civilisation' during several points in the film. So the set piece of apocalyptic weather that I mentioned earlier exhibit the sublime power of wild nature – violent, chaotic, amoral, beyond human control. The audience is complicit in seeking thrills in the scenarios of mass death and destruction caused by this weather. That complicity is encouraged rather than questioned by the movie. As Steven Keen points out in his book about disaster movies, disaster must regularly feature television news reports that comments on the events that are taking place. But they do not make "the critical point that we are all electronic voyeurs". The issue of voyeurs is not raised in these kinds of movies. The narrative focus is on the heroic survivors rather than the suffering victims and therefore the spectator is isolated from the full implications on the violent trauma enacted o the screen. In these revenge of nature films the problem with identifying with wild nature transgresses ethical norms as we witness nature 'getting its own back' as it were for its mistreatment at the hands of human beings. Yet these aesthetics of the sublime have always been based on certain vicariousness. The spectator takes pleasure in the destructive forces of nature, or is invited to from the safe distance of their cinema seat and therefore the safe distance of human civilisation. So this film accordingly seeks out identification not only with wild nature, but also the forces of civilisation that try to control that nature. Choice of the New York public library as place of sanctuary and rescue is significant in this respect. One of the survivors makes sure he preserves a Guttenberg bible for not because he believes in God he says, but as the first book ever printed, it represents "the dawn of the age of reason. If Western civilisation is finished", he adds, "I'm going to save one little piece of it". Central to the values of Western civilization

according to the film is science. Unusually for a Hollywood movie, scientists in this film are not evil but provide clear and unambiguous knowledge necessary for survival. Moreover, as to the action adventure genre to which the disaster movie is related, advanced technology is a force for good. Jack is able to locate his son in the library because of his friend's hand held satellite navigation system as we just saw. He also drives a hybrid car when we see him earlier in the film - so recent science technology will win the day ultimately. The values of civilisation find in those terms are also contrasted with the destructive forces of wild nature. In the scene where a wild pack of wolves have escaped from the Central Park Zoo return to attack Sam and his friends when they are out searching for food and medicine. Linda Wilson writes that melodrama is all about "Retrieval and saving of innocents". In this film the melodramatic plot of father rescuing son as we just saw makes the moral point – and I guess we all got it – that hard working fathers need to take a more active role in bringing up their sons. As usual, the rescue narrative also trumpets the male physical value of heroism and the effectiveness of individual action. Both Jack and his son Sam combine intelligence, physical bravery, duty, self sacrifice and love ultimately, the values necessary for survival. Individual action and American goodwill the film reassures us can make a difference. In this context, the penultimate image of this film showing the people being rescued by helicopters from the top of Manhattan sky scrapers is a kind of therapeutic anti image I would suggest to the television coverage of September 11th 2001, a wishful Hollywood image of survival and deliverance repairing the trauma of recent American history. So is the film therefore too reassuring, is it like a therapy that is likely to make people less interested in environmental issues or can they take encouragement from the idea that individuals can make a difference. Well from an environmentalist prospective, the resolution and melodrama is ideologically ambiguous I would argue. The idea that humanity through its ingenuity can survive whatever nature can throw at us is an argument used by conservatives to justify a non-interventionist attitude to the environment. This suggestion is compounded by the final image, as we saw, of the beautiful calm planet earth as seen from outer space. The astronaut comments that he's never seen the air so clear. The storm has passed confirming Jack's earlier opinion that the storms will last 'until the imbalance that has created them has corrected by a global re-alignment'. No matter what human beings do, it appears, the earth will heal itself. Now this message resembles the right wing version of the Gaia apothecia, the British chemist James Lovelock idea that the earth as a whole is a self-regulating system in a constant state of homeostatic balance. In his 1990 called 'Hard Green: Saving the Environment from the Environmentalists' Peter Huber, senior researcher at the right wing think tank, The Manhattan Institute uses the concept of Gaia to justify a conservative manifesto that includes the dismantling of existing

environmental regulations. Huber argues "That the most efficient way to control pollutants such as green house gases is not to worry about them at all, let them be, leave them to Gaia". So the notion of Gaia we should notice is not solely the property of New Age fundamentalists or deep ecologists. So this possible conservative interpretation of the film is offset by another more implicit message which came through at the end there I think advocating for liberal environmentalism. The film was released in an election year too and the director has spoken about very much wanting to contributing to that kind of environmental discourse as he saw Bush neglecting. Now earlier in the film Vice President Becker played by an actor who bears an obvious resemblance to Dick Chaney, refuses to listen to the advice from scientists on global warming arguing to take action would harm the American economy. In another reference to George W Bush's presidency, the administrator in the movie, has also refused to sign up to the Kyoto protocol on the reduction of greenhouse gas emissions. At the end of the movie, Becker who we just saw, he speaks to the nation as we saw of his new found sense of humility, he apologises to the nature and says he was wrong which is possibly the most unlikely bit in the whole movie perhaps! He says that Americans can no longer simply consume natural resources without taking the consequences. Becker in that final speech echoes the words of the homeless African American man who is one of the guys who is trapped in the library who refers to people as 'their exhausts and they're just polluting the atmosphere' so we do get this kind of reformists message as well. The disaster is wake-up call for America and a new start will allow for the changes in life style and technology necessary for a more sustainable future. Now this ideological ambiguity that I suggest is in the movie is open to both liberal and conservative interpretations. It's typical of what Steven Prince calls 'the ideological conglomeration of Hollywood movies derived from the industry's commercial intention to maximise profits by appealing to as wide, and therefore diverse, audience as possible by making movies which ideologically speaking, seem to have it always at once. Now that kind of ideological analysis I've just done of the ethical and aesthetic aspects of the movie implies questions of audience reception which is the way I want to end this paper. According to an influential branch of psycho-analytical film theory so called 'post-structuralist positioning theory' as it's called in the trade, Hollywood movies tend to render spectators passive because of their conventional narrative form so this was a theory that very much came through in the 1970's. Under the influence of Bertolt Brecht theories of narrative so films academics like Colin McCabe, Steven Heath argue that only modernist or avant-garde narratives can produce a more active or revolutionary even film spectator. As the 1992 textbook 'New Vocabularies in Film' puts it, psycho-analytic film theory 'Sees the viewer not as a person a flesh and blood individual but as an artificial construct produced and activated by the cinema apparatus'. Now in

his book called 'The Crisis of Political Modernism' D N Roderick exposes the flaws in this kind of thinking I think. 'The politics of political modernism' he writes assume 'an intrinsic and intractable relation between text, films and their spectators regardless of their historical or social context of that relation'. But film viewers are flesh and blood and individuals as well as members of social collectives and when they are treated as such by film theorists and film researchers, the practical film reception becomes much more complex and less stereotyped as imagined by that crude version of subject positioning theory. Empirical audience research tends to show that we don't all watch the same movie in the same way and that audiences responses are complex and defined by a long list of variables such as nation, region, locality, class, gender, sexuality, ethnicity, race and last, but certainly not least, individual temperament and history. When we look at the public perception of *The Day After Tomorrow* in this light it is clear that the movie was appropriated in different ways by different groups as we've seen already so the affect of movies on their audiences should not be taken for granted I would argue or viewed too simplistically. Nevertheless, I would argue that Hollywood movies like *The Day After Tomorrow* their sole or perhaps their main source of environment should still worry. Hence the importance therefore of those acts of reappropriation that I've just mentioned by advocacy groups such as I've just mentioned MoveOn.org. and Greenpeace who use the particular movies like this to encourage environmental debate that I guess we're trying to have today. O.K. thank you very much.

Mark Nash. Thank you David, that raises a lot of interesting issues to take up, once we've heard from Paula. Paula Willoquet-Maricondi is a Professor at the School of Communication and the Arts in Marist College in New York State and she teaches on film aesthetics, history and theory as well as on particular filmmakers and on social and environmental justice. She has edited books by Peter Greenaway and Pedro Almodovar and written also on Goddard and a range of Hollywood and European art and directors and writers. She is currently editing a volume of Essays on an eco-criticism which she says is tentatively entitled 'Framing the world: Eco-criticism and Film'. So Paula, many thanks.

Paula Willoquet-Maricondi. Thank you, it's a pleasure to be here and very nice to have the opportunity to leave the United States and gain a different perspective. Since the title of this panel or this series of events is Towards an Eco-Cinema I thought that perhaps I should attempt a definition of the term to begin my talk. So let me now suggest Eco-Cinema refers to documentary fiction and experimental films that explicitly express issues of ecological import to further environmental awareness, protection and preservation and in a more general sense encourages us to reflect on the general term of what it means to us to be part of the environment, the eco system, to belong

to the biotic community. Over the last 10-15 years there has been a proliferation of environmental film festivals world-wide and other ecological orientated events such as this one dedicated to addressing these concerns. The films shown at these festivals are often documentaries on subjects ranging from global warming, to the world's hunger crisis, the impact of globalisation on people's environments, water contamination, genetically modified seeds just to name a few. Films like *Darwin's Nightmare* for example which we saw last night. That film was also shown at the DC Film Festival a few months ago. I would like to mention a few other documentaries that address this issue and might be of interest to the audience. One of them is *Thirst* made in 2004 by Alan Snitow. This film traces the struggle of water rights as a catalyst for community identity and resistance in Bolivia, India and the US and I will say a little more about this film later. Another film to which I will also return later which is worth mentioning is *Power: One River Two Nations* made in 1996 directed by Magnus Isaacson and produced by the National Film Board of Canada. This film documents the Cree people's struggle to protect their land and water rights from development by Hydro Quebec and it was instrumental in the State of New York cancelling its contract with Hydro Quebec for electricity. Another film is *The Future of Food* directed by a lady married to the *Grateful Dead* – Gerry Garcia. This film was released in 2004 and examines the changing agricultural landscape prompted by the introduction of genetically modified seeds, the patenting of these seeds, the increasing susceptibility of traditional crops, the diminishing access to seed stocks and traditional agricultural practices and the world wide corporate intrusion of farms. One last film I would like to mention is *Exporting Harm; The hi-tech Trashing of Asia* which in 23 minutes effectively documents the affects of the export of toxic computer waste to China. This film is produced by the Basil Action Network which is a Seattle based international activists working to halt toxic trade and if you Google the name of the film you'll get a lot of information about it. Everybody knows Google here. So while there's been a growing interest in ecology and environmental justice issues on the part of film-makers, there has not been sufficient engagement on the part of audiences including in particular film critics and theorists. No engagement with these issues I just mentioned nor with the nature of film as a genre or more generally, with the issue representation of nature in films. There has been even less engagement with the view of technology vis a vis the natural world, the way that it impacts our world and shapes our relations to it and our representations of it. So Mark Nash suggested that we might ask some uncomfortable questions so I will do my best to put forth some provocative ideas and I will take the black and white approach, no nuances here. I wanted to actually begin by reading the question that was asked of Hubert Sauper, the maker of *Darwin's Nightmare* which was in this hand-out that I picked up when I came in yesterday. The question was 'you talked about how

the consumer democracy and form of capitalism has won the global struggle in the Darwinian sense, do you think thee is any way to stop the kind of things we see in this film?' That's a very good question, I'm sure we would like an answer to that. And he says 'there are two ways, the first is to get much wider awareness of what we are doing by opening these markets. The other possible solution is global breakdown. I don't see how current developments can keep on going. There is a big difference between knowing and awareness. You don't need me to tell you that kids are starving in Africa but I can give you a different awareness in the language of art. There isn't anything new in my movie, it's all known, I just give it a face.' Somehow that transforms our knowing into understanding, at least that's what I hope and I hope we'll get a chance to talk about that film.

So I'd like to begin by inviting us to talk about some of the recent nature films that have been immensely popular. One of them is *Winged Migrations* released in 2001, a film that in many ways defies the genre of nature documentary and the other one is *March of the Penguins* which is due to be released here and I promise I won't spoil it too much for you. Like many nature documentaries, both of these films tap into our investment in technology as an agent of knowledge not understanding therefore solutions to problems as an agent of progress. It is thanks to the technology in this case of cinema, that we can know and presumably appreciate the amazing birds featured in *Winged Migrations*. While the experience of seeing the birds in both films actually may enchant us, these films ask us to be in awe primarily in the role of technology in bringing birds to us. *Winged Migrations*, particularly after the release of the DVD which contains a documentary of the making of the film, is a testament to human skill and ingenuity. We learn about the specialised cameras and the array of flying devices used, the successful imprinting of birds on humans, the simulated migrations and how the birds were made to get used to all things human. Even if we don't feel terribly informed about the birds' migratory habits in this film – and we do not – we are amazed by their beauty, their resilience, their stoicism, heroism and loyalty which the film and other technologies enables us to witness. I realise that you haven't seen the film but please do go see the film when it gets released. We all aware generally only those nature talks that are visually appealing and dramatic show well on film will get communicated at the expense of the less visually spectacular situations and problems. Nature films that are informative and vocational are often guilty of the same approach. We get to see the exciting moments and are spared the boring bits. As Gregg Mitman points out in a book called 'Real Nature: American's Romance with a Wild Life on Film' the drama of nature we see in these films do not match our every day experience of the natural world and 'Nature is not all action. Conditioned by nature on screen, we may fail to develop the patience, perseverance and passion

required to participate in a natural world with all its mundanity as well as splendour.' What drives all these nature films and narratives is drama and the biographical individualistic approach. The *March of the Penguins* has had so much success in the US grossing about £36.6B in part because it is filled with drama and reflects back to us our own cultural assumptions and ideas. It was a second gross seeing documentary after Michael Moore's *Fahrenheit 9/11*. The film is selectively anthropomorphic and does nothing to advance the viewer's awareness of sensitivity or engage with eco systems or the inter-dependence of living organisms, the dangers to these eco-systems from global warming or mercury contamination for example. In March of the Penguins death is shown to be a very very sad thing but the word 'death' is never mentioned. Penguins don't die, they just don't make it or disappear. The film appeals to our emotions when the penguins show their heroism, form couples or are the victims of predators, seals and gulls but glosses over the fact too that penguins need to eat to survive. In fact, what the film stresses is the number of months that the penguins go without food in order to procreate. Following up on what David said about reception (and I swear we did not plan this together!) in the US the film is being discussed in radically polar ways. As promoting monogamy, parental sacrifice, family values and is making a strong case for intelligent design on the one hand and as being a feminist exploration of parenting relationships and evidence of evolutionary practises that lead the penguins to develop a system of reproduction that guarantees that they will not over populate and outstrip their food supply. But the film only in passing pays lip service to evolution. It opens with Morgan Freeman's narration and I'm assuming you'll get the English version with his narration, rather than the French version, so I quote "For millions of years they have made their homes on the darkest, driest, windiest, coldest continent on earth and they've done so pretty much alone." They are lone frontiersmen, a concept most Americans will identify with. As far as addressing current issues such as global warming the film hardly brings up the point. The film-makers claim they wanted to create a film that would have wide appeal and reach a large audience and that would communicate issues in other ways than by lecturing audiences. They wanted to leave it open to any reading. Well, they succeeded in that. So we do need to consider the implication of such films for understanding our relationship to the natural world. Do they reinforce or bridge the gap between the experience of nature and our expectation of nature? Do they re-affirm culturally established patterns of thoughts and action, vis a vis the natural world or do they challenge them? The term Eco-Cinema also refers to an avant-garde film such as *Riverglass* which we have seen today. They represent the environment as no mere landscape but as place and as being. The avant-garde film critic and historian Scott McDonald who first introduced me to *Riverglass* has applied the term eco-cinema to films and videos which use the

technology to "Sing the value of the particularities of the physical world and to create an evocation of the experience of being immersed in the natural world". *Riverglass* does just that, it focuses our attention on particularities, on experience and on emersion. It also invites us to adopt a different relationship vis a vis the natural environment, of which we are a part and on which we depend for survival, by making us adopt a different relationship to film spectatorship and I'll say a little more about this in a moment. Eco-cinema however is only problematically useful as a term to describe films that are environmentalist in the sense understood by David in that films on environmental issues are central to the narrative but where the environmental issues as addressed in the films are merely backdrop to human drama. In such films, environmental terms are simply another topical issue at Hollywood's disposal and a case in point is Steven Soderberg's *Erin Brockovich* a film about an environmental justice issue in which the contamination soil, water and human life and by the end of the film is upstaged, not only by the individual courage and heroism of its female protagonist, played by Julia Roberts, but also by the material rewards that come with such heroism - the expensive down town, high class/high rise office, the shiny red, gas guzzling SUV, the 2M$ in the bank and, of course, the media notoriety. Now I don't mean to be cynical or dismissive of the real Erin Brokovich's dedication to raising the awareness of water contamination and potential corporate malpractice after all many environmental organisations still use the film to raise awareness about such issues, as I do in my classrooms. The point that I want to make here is, by the end of the film, not only are the working class affected families and environments forgotten by the film but so is any serious discussion on the way of life that demands every increasing dependence on non- renewable and polluting sources of energy, not to mention the obscene profit margins. By focusing on chromium 6 rather than, say, mercury contamination, the film exploits our fears only to reassure us that we have nothing to fear –Brokovich is here. In fact, our dependence on non-renewable energy from chlorine clinical plants and cold fire power plants is one of the principal sources of mercury contamination in streams, wetlands, reservoirs and lakes. Scientific studies continue to show widespread mercury contamination in fish. The US Environmental Protection Agency has established fish consumption advisory because of mercury contamination for all US States but seven. The same is true with a 2004 global warming disaster movie *The Day After Tomorrow* which David discussed. The film's reliance on dramatic exaggeration, instant consequences and on dazzling sci-fi affects, its apocalyptic premise, its minimal attention to science and emphasis on the individualist heroic actions of the main protagonists to save the world and if not the world, at least the family, upstaged any real concern and engagement with the reality of global warming. While we wait for scenarios like those in *The Day After Tomorrow* to unfold and for heroic individuals to come

forth and save the day shall we ignore the less spectacular standards but much more real and devastating impacts of human action on the biosphere. How many tsunami and Katrina's will it take, and I'm not suggesting that I can prove that Katrina is the result of global warming but I think we can't just – that's not really what we should be trying to prove a one to one relationship – so we will talk more about that. What we might be hard pressed to make in these two films is instances of eco-cinema, simply on the basis of their environmental topics. We must, however, as viewers, adopt an eco critical standpoint towards these films and through that standpoint analyse a critique, the values beliefs and patterns and working of culture. Patterns that are counter to an ecologically sound and sustainable way of being in the world - we need eco-cinema but we also need ecologically informed and orientated perspectives on films that are explicitly or not about environmental issues. But whose representation of nature reveals much about the ideology that informs the production of these films. My particular interest then is not simply in environmental films or in cinema but in adopting an eco-critical stance towards all forms of cultural production. So for me, *Riverglass* can help us practise eco-criticism by engaging us in an exploration of the local and global implications of our culturally determined representations of natural features and eco-systems. As we become more conscious of the ways we represent the environment as well as the ways we process as audiences these representations, we become more sensitive to the ideological origins and impact on our lived relationships to peoples and places. How their relationship is understood and lived directly informs a position and responds us to specific issues such as global warming, ground water pollution or the control and ownership of water. So as mentioned last time, yesterday, what we perhaps need is a paradigm shift. In Towards An Eco-criticism, the author argues that our static appreciation of nature, and our representations of nature, literature, photography, film, advertising, has paradoxically worked to avail the causes and effects of environmental degradation. I would like to spend a few moments exploring the problematic issues of the aesthetic appreciation of nature in relation to representation which is linked to the issue of technology by discussing my own reactions to *Riverglass* and, again, I wrote this before I knew that *Riverglass* was going to be shown. I was really thrilled that it was going to be shown and Andrej was going to be here. As we have the opportunity to experience it, *Riverglass* immerses us into the crystal clear waters of the river Soča in Slovenia. *Riverglass* is not an overtly activist, polemical or political film. It does not deal with issues in the traditional sense. It is not about injustices. It has no human characters more or less. No dialogue, no story. However, the demands of the film's lengthened approach put on viewers are political. They are the product of a political action because they are transformative of our perceptions and awareness of nature and our experience of ourselves as consumers are representational and members of the biotic

community that includes us and the river. By challenging our habits of perception, our relationship to real and filmic time as well as our expectations about the representation of nature, *Riverglass* opens up a space in which we may meditate on our relationship to the natural world and how that world has come to function in representation and in reality. As Scott McDonald pointed out 'Film viewers are conditioned to experience beautiful landscapes as "Not something deserving of sustained attention and commitment". *Riverglass* challenges this conditioning by giving us something else to focus our attention for 41 minutes but the flow of the river from within the river through the span of the four seasons. At the same time, *Riverglass* does not allow us to forget that we are watching a recorded manufactured image of the river although it does not idealise the technology which produced the images. *Riverglass* transforms our condition in relationship to time by demanding that we be patient and appreciative of something to which rarely lands our attention. It asks us to see the river in its own terms, not in ours, to experience the river for itself not for what it can provide us with. It challenges our position in relation to space as well by making us uncomfortably aware of the dark screening situation and when I wrote this I was thinking of my class room, the hard chairs, the noisy audience and I wasn't thinking of this hall. But we're also captivated by the space represented in the film on the river. So *Riverglass* creates the conditions for an exploration of a different kind of relationship to the non human world. What Aldo Leopald, one of the founders of the Wilderness Society defined as 'a relationship founded on the land ethic that enlarges the boundary of the community to include the land in the broadest sense.' This says Leopold 'Changes the role of homo sapiens from conquerors of the land to plain member and citizen of it'. *Riverglass* does this subtly and indirectly by slowing down time, by demanding that we notice the insignificant details of the life of the river, by suggesting to us through its self reflective element that there is no dichotomy between the river as object and the human as subject. By proposing the experience of the river in the film is an expression of being in nature, unlike *Winged Migrations* the making of *Riverglass* did not require that nature adapt to our needs. So the film can be seen as a metaphorical expression of a symbiotic relationship between people and nature, suggesting the possibility of a healthy exchange and co-existence. For me, *Riverglass* is a visual evocation of an insight expressed by the Canadian David Suzuki. Following his initial encounter with first nation's people, Suzuki noted "We framed the environmental problem in the wrong way – there's no environment out there for us to interact with, we are the environment because we are the earth. For me", says Suzuki "it began a whole shift in the way that I look at the issue of life and the way we live on this planet." So shift in perception, shift in the way that we look at the environment, the way in which we see our own position in relation to the rest of the biotic community. It is fundamental in bringing about a

shift in the way we live, that is essentially what *Riverglass* compels us to do. To re-adjust our perception. To greatly simplify matters, I would put forth the provocation that the central problem that needs to be addressed as we address specific manifestations of social and material degradation and injustice is the problem of perception or miss-perception. We have erected a social structure, a civilisation based on a perceptual error since the visual arts deals in matters of perception and representation, perhaps they can help us regain a more proper perspective. The perceptual habit or ideology that defines nature in either aesthetic or utilitarian terms, nature as beauty or nature as resource and raw material, are the same ones that have defined indigenous people and lands as invisible and under-developed. The opening of Mangus Isacsson's 1996 documentary *Power: One River Two Nations* for example enacts a critique of this ideology by giving us a bird's eye view of another Quebec territory that is explicitly designed to evoke the way film has historically supported the rhetoric need for invisibility and casting the land and its people as remnants of a forgotten wild and desolate frontier. This portrayal is immediately challenged by the caption asserting that 'Most of the world's great rivers have been damned and destroyed by hydro-electric projects'. I wasn't going to show clips but I decided, after all, to do so, so could we have the first clip please, thanks.

Film clip: Power: One River Two Nations, 1996, Magnus Isacsson (produced by the National Film Board of Canada).

There's more to this story than I had hoped for, but that's for another time. This film is an apt example of eco-cinema for not only documenting the 5 year battle of the Kri people to protect their land but, more importantly, for asking its audiences to re-think the understanding of land not as scenic landscape or empty space or economic resource but as place and as intimately linked to culture, identity and survival. The film especially addresses a non-indigenous audience and one of it's challenges is to make its audience sympathetic to the plight of a people that for many in the industrialised world are invisible. The films greatest challenge is to evoke a different kind of understanding of the human relationship to land. To achieve this, the film consistently shows an inter-dependence of people and land visually and verbally as, for example, when a Kri woman says "The land is our connection to re-strengthening our spirit as a people. The more our land is destroyed, the more our spirit is destroyed". Next clip please

Film clip: Power: One River Two Nations, 1996, Magnus Isacsson (produced by the National Film Board of Canada).

The construction of dams and hydro-electric projects are but two examples of the over exploitation of river systems affecting communities all over the world in developed and developing

countries. In 2002 Mot Barlow and Tony Clark published a devastating account of the looming global shortages which would make it "The most threatening ecological economic and politic crisis of the 21st Century". They argued that not only is our per capita use of water doubling over twenty years but "The legacy of factory farming, flood irrigation, the construction of massive damns, toxic dumping in wetlands, forest destruction and urban and industrial pollution has damaged the earth's water surface water so badly that we are now mining the ground water reserves far faster than nature can replenish them". In water wars, India's most prominent environmental activist, Anna Shriva, calls our water crisis "The most pervasive, the most severe and the most invisible dimension of the ecological devastation of the earth". This alarmist intuition is compounded by the increased corporate privatisation of the ecological comments what Barlow and Clark calls 'the theft of the environment. Once the basic right of all human beings intimately linked to environmental health and cultural preservation. Water is quickly and dangerously becoming a tradable corporate commodity but Anna Shriva warns that the privatisation of water services is the first step towards privatising all aspects of water. The film *Thirst* which I mentioned earlier focuses on the responses to the privatisation of water and profiles the struggle for local stewardship of water in India, Bolivia and Stockton, California. What is most effective about the film is the way it links the fate of these communities, showing that while they are noticeably different from each other in cultural traditions, they share the same struggle for self determination against corporate hegemony. The film strategically opens with footage from the world water forum in Japan and images of civil unrest in the streets of Cochabamba. It then focuses more particularly on the efforts by citizen groups in Stockton California and in the desert region of Rajasthan India to cutting footage of resistance efforts in these communities with talks at the world water forum and the riots in Bolivia. The very structure of the film then makes the point that water by its struggles for self sufficiency and self determination in various parts of the world are linked. The Stockton community provides the easiest point of identification for an American or Western audience enabling us to forge links between grass root movements in our countries and those with different cultural traditions. In India where privatisation of rivers, streams and wells has made water as expensive as milk, grass root movements have formed to re-green deserts through indigenous knowledge of rain water harvesting and rain water conservation techniques. Water conservation movements are spreading all over India helped by the growing participation of women, the support of women in water conference and the use of ancient traditional water conservation technologies. One of the movement's most vocal opponents, Rajendra Singh, compares the struggle for water independence to the struggle for independence from colonial oppression. The basic issue, he explains in the film, is rights - rights of the

community, of nature and of the earth. In emphasising conservation and defining the issues as being one of the inter-linked rights of people and nature and conservation of the biotic community, Rajendra Singh echoes the sentiments exploited by Leopald's and ethics and David Suzuki that there is no environment out there – we are of and within the environment, we cannot isolate the environment from its relation to society and culture and vice versa. We also cannot ignore the disproportionate impact of environmental degradation on native peoples and poor people and the commoditisation of people's end places through the ideology of the picturesque. We cannot ignore the ways in which human relationships with the land are mediated by cultural norms and bound to power dynamics in relation to gender, sexuality, race and class. We must have, not only eco-cinema, but ecologically minded viewers able to discern the ways in which film and other cultural productions either re-enact or reinforce or challenge assumptions about humanity and nature. Thank you.

Final panel discussion with questions from the floor

Mark Nash. There are so many issues raised in both the last two presentations that it's a little bit difficult to know where to start so I am, in a way, going to plunge in with a kind of just a caveat or an aside which is a way of easing into a discussion which is that when we took the title towards an Eco-Cinema from Scott's paper I realised on re-reading it, that in some ways, he is slightly romantic in his position and that your re-framing it towards an echo critical cinema is probably more appropriate. It is not that we could not have a concept of eco-criticism within eco-cinema, in a way that is what we have been arguing for today but the paper that he wrote was actually slightly melancholic in tone. In a sense, he was glamorising films and film-makers who were in some sense renewing our sense of relationship to nature but, at the same time, there is a phrase that really struck me that his own position was that, in a sense the world is kind of irredeemable, is not redeemable in a way and that we just are slightly passive watching and this is a kind of sort of a pre final act or pre-apocalyptic. I don't know whether this is doing him a slight injustice.

Paula Willoquet-Maricondi. I don't want to speak for Scott but he is primarily interested in, well, his life has been dedicated to making avant-garde films accessible and introducing avant-garde films to people and I think he has come, over the years to recognise a connection, something else he feels in relation to nature and, again, I shouldn't be speaking for him, so I think that part of the way he framed the definition of Eco-Cinema has a lot to do with the films he was dealing with and introducing and until I met Andrej I was not at all sure how he was going to take it what I had to say because I thought I was taking it in a slightly different direction. I see *Riverglass* as much more of an eco-film/eco-cinema than the other films that Scott discusses. Overtly or not, you talked about your childhood experiences or connection, you know, being in that moment, the relationship you know and I think like Peter Hutton, for example, I don't know if anybody is familiar with his films. I've not really talked to him about it, I don't really know what he feels about it but it is just a very different experience and it isn't quite the same thing but his films contain incredible views but it's just taking it in a much more politicised direction, that would be a way to put it, I'm taking it in a more politicised direction because that is what I'm interested in.

Mark Nash. Thank you Paula. I have one more question for the group and then we will open it up. Another thing that has pre-occupied me as we have been talking and thinking is that at what point did our relationship to nature kind of take on the connotations of the sublime if you like, at what point did it become a good thing because it's only in the last couple of hundred years that we have I think had the kind of representations that we have had, it's not to say that I don't value

them more than people, but there is still that kind of wonder and awe which you feel is so much tied in to 19th Century aesthetics in a way and that the note that I made in my introduction paper was that we have to get back to a much more less, not romantic exactly but a view of nature as much more real tooth and claw to use the phrase of Tennyson to something which is much less pleasant to think about and in a way that these other relationships were set up by, you know, very well meaning and very important movements of preservation for the landscape, etc .in the 20th Century, but I don't know whether that is taking the discussion in another direction. Maybe we should open it up and see what questions people have now.

Paula Willoquet-Maricondi. I'll just say this, in my sort of clear cut way. I'm not prepared to dismiss the romantics, I don't think we need to create this dichotomy and also I am not prepared to dismiss the sense of native peoples' relationships to the land. We can find evidence for sustainability, we can find evidence for people's destructive behaviour. We can evidence for both – they have both been around for longer than we have. It will be a miracle if we are around as long as they have been, so I think the question of skill needs to be discussed and I think the question of local versus global impact of our actions needs to be discussed. So I think we can dismantle the dichotomies and, you know….

Mark Nash. Great. Thank you Paula.

Question. I really would have enjoyed listening to a few other questions so that I could have put mine together but it looks like other people are holding back so I'll do the job first. There was a suggestion made about you probe romanticism, a return to the sublime, a return to the beautiful as 'Is this a good route?' I have only got a hobby interest in this but I think that early romanticism actually had its feet wet, was right in there with early natural history. That is actually an interesting relationship to re-discover. It's one that I found rediscovered in your film Andrej and one of the interesting things about your film of course, we talked earlier today about the slightly hectic pace of the American documentary earlier and that the relatively leisurely British documentary which perhaps can explore issues with a slightly longer form. Of course, they looked like they were going at a Formula 1 pace compared with your own and actually there was that slightly annoying moment where you seemed about to seem to take the camera out of the water and I had already become a fish by then and felt suffocated whenever it looked as if we were going to be denied, by then, our natural environment. So I thought that was a really interesting success. The difficulty of course is that a long form and, if you imagine it, as a newspaper review a rather testing form for the public before they sit down and if you like are being forced to watch it, is that you know a television executive trying sympathetically to get out to 4 or 5 million people say in this country would say 'Well how the hell am I going to

do that in a few minutes, get that through the commissioners' and so on. I don't have a conclusion to this and I think that's probably as close as I'll get to a question.

Andrej Zdravič. That's good. Can I just say that this film has been shown on TV, it was bought by Arte and it was shown about 6 times with very good ratings, I mean for me 50,000 people in France and Germany which is not bad considering Arte is known as far as the Middle East and so some people did take the plunge you know and when I presented this at the ((?)) conference in 1998, there were people from National Geographic and people from the BBC who also showed sympathy but who didn't take the plunge but, you know, other people did, so I think of course it makes me feel good but I also think people should see this and its very gratifying.

Michaela Crimmin. Can you talk about audience response.

Andrej Zdravič. Well, you know, this film has touched many different audiences, I mean, we are talking from people like you and from scholars, scientists. I mean, I got mail from biologists, micro cell whatever, who said 'this gives me a framework for thinking about problems that we can't solve by doing experiments. It gives me a ground for seeking an approach to solving problems in my field, micro-biology.' So it has been really gratifying for me to hear that. Then I've had mail on the other spectrum from a poor person and I say 'poor' in the fact that this person indicated that she was battered in the war in Yugoslavia. She said that she 'saw this film and it's healing me to look at this'. I've got response from terminal patients, from children. I mean, it just goes to show one thing that this is something that we need and maybe what there is to calm down inwardly. It's like that we are over heated with thoughts, and this came up already yesterday or this morning that we are over saturated, over-heated, we don't have a moment any more to digest what's happening to us, what we think, what we make out of it all, so it is almost like, I won't say a conspiracy, but you know we are so bombarded all the time that you don't have time to think about anything so you just consume, go to work and consume some more and so maybe that is part of the strategy but it doesn't matter. We're doing it to calm down and I know sometimes it can be tedious but if I can get a modicum of percentage of people to do that, I will be very happy. I mean because I am the son of a surgeon, a doctor, and maybe I have a little bit of an inclination to do something for the world that is more that just expressing myself.

Mark Nash. Yes, OK thanks, now there are quite a lot of hands – over here and then two at the back.

Question. To pick up on the last question, pressing Andrej again (because I can't pronounce your second name, sorry) I don't see that peace is not trying to force it's way into peoples' proverbial living rooms. What I have always dreamed of myself is to again from an

artist's viewpoint is to go into museums and see contemporary work like that in a darkened room on a screen that size and in this meditative, therapeutic way that you suggest. Equally, I could see enormous use for that in mental health forum. I have been dealing with that recently and what is still labelled 'alternative therapies' I hope will become more main stream. But that, in terms of the calming influence on people with psychiatric disorders would do wonders and 41 minutes seems, you know, the ideal amount of time. You edit it in a way that OK I mean I don't want to waste anyone's time trying to pitch that to geographical, not that, you know, again I've got a television background and to certain ((…)) Sitting in Washington I'm thinking of one in particular would lap it up in particular but you know at the end we would still be back to square one in the sense that the dollar economy, etc. So I see it as an absolutely fine art piece, not that I'm actively grovelling at you but I'm thrilled by that as it's exactly the kind of work I have been banging on about in the wrong arena in a sense because of this Jackson Hole and the natural film industry circuit being in a sense a bit of an outsider in that community because, you know, from a fine art background, anyway enough about me, but the way it's edited it keeps the interest I found very much. I wasn't switching off. I was shifting weight a little bit and I felt a little bit guilty about doing that, but you're kept alert. I can only think in terms of frame of reference to 'A little fish in deep water' is a beautiful film made by, I think, Dead land and Stone in I think Lake Tanganyika. It was a funny film actually about little fish. I must see Darwin's whatever it is later on and that unpronounceable ((?)) and the speed of the film an intrinsic part sea and in a sense the full immersion where I've always had issues with the whole thing of narrative and being lead through hand held natural history documentary explained you know, what you are seeing and why you are seeing it and understanding the big context so this was a bit of a ramble I suppose. Going back to where I started – it's not a TV thing that film for me personally, it's a different context.

Same Questioner. Do you want to reach many households?

Andrej Zdravič. No I'm not into that. I mean, I went through 30 years of struggling to keep doing my stuff and just a few people saw it here and there so maybe I'm making an exaggeration but that was never my focus but I think that this maybe good for people.

Same questioner. I liked the going backwards and then shooting forwards very much.

Mark Nash. Another couple of questions at the back then I have actually something to ask David but we'll come back to that in a minute.

Question. Hello ((I'm Deborah Harrison)). I greatly enjoyed your film. I go sea kayaking so it was very interesting for me to watch a film with so much water in it as that's the place I go for my inspiration. It also made

me think, as someone has said already, that in a lot of media these days, you feel as though you are being bombarded, that there is no silence and there is no space as if some modern media communicators are almost scared of putting silence and space into works because then that would give us too much time to think and reflect. It's a bit like the supermarket argument that we are being given what we want and what we ask for which actually I don't believe. I think a lot of current British TV programming if you take a look at it is becoming really rather dreadful and it's not really helping us and so we have these very busy lives where we are bombarded by telephones and e-mails and then we go home and have quite a lot of quite poor TV and I think it would be very interesting if this budding eco film may be movement, if that's what it is, is actually able to offer us something different and alternative and may give some peace and silence where we can reflect on some of these bigger issues.

Question. I've been scribbling down notes again so I'll try not to waffle on too much but I think they are all connected. I was quite interested in the way Andrej had adapted certain technologies, whether they be considered low tech or high tech and I wondered how, you said that some people made parts for you and I'm quite interested in what the response is when you ask for things like that 'cause I've asked for things to be adapted to be put up trees and things and I'm treated like a freak because you are using things unconventionally but I think that can be the role of the artist to challenge conventions and to be creative in that way which lead me on to thinking about the role of the artist and their role as an author, as a kind of visual artist and then comparing that with the bigger machine of Hollywood and I wondered how much you tried to control the camera. I know you say you actually had a monitor. I wonder how much you let the elements take control of the camera or whether you always wanted to kind of fix the view point. Someone mentioned about the voyeur as well cutting out the boring bits. Artists do that as well and is it not just down to the integrity of the individual as to what people get.

Andrej Zdravič. I think economy is very important I mean, after all, picture has a frame, a film has a time frame, like you mentioned the 6 hour movies. Warhol has done the last 12 hours. I mean its fine but I really think economy is the key and therefore I did cut out quite a lot and I do try to control what's happening, I do look at my stuff 100 times maybe and I spend thousands of hours analysing details. If it works after 100 times then I figure it's going to be O.K. So I do test it out and anyway economy is important.

Question. Thank you very much for bringing up interesting issues, and I was so overwhelmed thinking 'what shall I do after this movie', you know, it so easily solves the problem the movie in the end and then I thought that silence was still going on. I just listened to your talk and then Paul's talk and I just remembered the more grounded issues. We

have friends in Western Pennsylvania, Corey Merryman and Tom Merryman, actually Corey is the niece of Rachel Carson and they went to ((?)) 5 or 6 years ago and camped for 2 or 3 weeks and talked to the indigenous people who were very craft orientated people. They are very very concerned about the issues and also the diamond and mercury programme, the building of the town it was much more serious. They are very kind people and they asked the Indian people how can they help them and they answered to them 'just go home and deal with your programme'. After they came back, of course, they didn't immediately act but a few years later they were more and more involved in local environmental issues and it reminded me of, you know, looking at one sport and almost like asking to the water. In a very modest way I think it is really important for all of us instead of just looking so far away. I can't imagine that during winter, how many hours you were standing the water. That's really amazing. Can I do something like that even for a few seconds, doing real things, you know. We are in a very comfortable room but it's saying we could be there. Thank you very much.

Question. When I was watching Tim's presentation of your joint project, I couldn't imagine spending that amount of time working on a research project of that extent. That was also an amazing investment I think. I wanted to ask David maybe to say a little bit more about the thesis of the book because you've recently published a book about Green Screen and the environmental issues Hollywood raises and whether your analysis of other films kind of takes the same position as what you are doing *The Day After Tomorrow* because, in a sense, you are taking this model which I think is a very interesting one in that on the one hand the films generate all these contradictory meanings and they come out of a Hollywood machine which is very sensitively tuned to a range of contemporary issues but I was wondering whether that's, in a sense, as far as one can get with that argument if you see what I mean. In a sense, you are really returning it to the audience to construct meanings and actions around the films which I think is a very important position or whether there is in your analysis of other films, you came to a different kind of position or maybe just a little bit more about the general argument of the book would be quite helpful to people.

David Ingram. Yes, I think that a lot of the stuff in the paper about melodrama and realism comes out of the book. I think that obviously there are movies which, as Hollywood movies, work better than the one I've just used then, I can't explain myself to perhaps ridicule myself by trying to talk about this particular movie but I think that the book talks about other movies, for example, *The China Syndrome* and they guy I mentioned in the paper there, Patrick Michel (who is one of the scientists who still argues about the human created climate change) ((…)) compared this film to *The China Syndrome*. What I don't want is for this film to have the same affect as *The China Syndrome* and on the

nuclear power industry. My sense is that *The China Syndrome* is a better movie than the one that we have just seen there but it still works in basically the same way. I think that this kind of combination of realism and melodrama and I think that the book I wrote deals with various themes I suppose around Hollywood movies and as Paula has said in her talk, there is a difference between what I call 'environmental movies' and what she is calling 'the eco-cinema' the sense of cinema being informed by ecological ideas. The movies I am writing about deal with environmental themes as a kind of central topic so I guess the idea is that Hollywood likes to make movies which are topical. You know, in the 1930's gangster movies were seen as taking their plots from the headlines from the recent newspapers. So there is a sense that Hollywood sees their audience from taking plots in topical local issues but it's fitting them into the commercial mode of film making which is very much based upon the genre stars on the particular narrative formula. So the book is arguing against the way in particular environmental issues get, in a sense, distorted by that kind of way of making films. But perhaps more positively also, going back to what Linda Williams says in her writings about melodrama that she is trying to defend melodrama from the accusation that it is a kind of failed realism. Melodramas can work in terms of building a sense of community and a sense of perhaps naively us versus them – good versus evil. Nevertheless, in environmental terms, there are movies where we get conservationists fighting against the wicked big business men - that kind of scenario. So they are basically melodramas but in terms of environmental activism, they can involve the audience in a kind of emotional level at least.

Question. Do you think there is a danger in when we discuss films like *The Day After Tomorrow* in these sort of academic terms if you like that we are in danger of vesting them with a significance and relevance which frankly they don't have?

David Ingram. Possibly.

Same questioner. And that, in doing that, we are detracting from kind of more serious issues if you like.

David Ingram. Yes, I would actually agree with that. I write about these movies because I am interested in film really but I wouldn't argue that Hollywood movies about the environment that we've just seen are absolutely essential to the future of the environmental policies in America. My sense is, as I've said in the paper that if a particular person in the audience has only seen *The Day After Tomorrow* and knows nothing else and has no other sources of information then I think that is a problem but it is also very unlikely that it's the case. My sense is that if we are talking about public awareness of environmental issues in awareness of the debates, it's the news media and, particularly in America, television broadcast news media that are the real issue I

think, rather than Hollywood. My sense is that when people go and see Hollywood movies, they know that they are watching Hollywood movies and having experienced cinemas in America most people talk through them, they shout at the screen, they kind of laugh. A movie like that would possibly just get people just laughing at it I would imagine. So again, my sense is I doubt whether this movie has that great an affect ultimately and as I say, I think that it's NBC and CNN and those kinds of television media that is where the real issue about public awareness should be discussed really.

Paula Willoquet-Maricondi. I would say that a film like *The Day After Tomorrow* in itself doesn't have that great an impact but I think there is an accumulative impact. It's becoming almost unbearable to live in the United States. I deal with 20 year olds and I feel like I have a sense of what people do with a film like *The Day After Tomorrow*. I feel I have a sense that a film like that simply reinforces the values that are the predominant values right now. So I think *The Day After Tomorrow* is a dangerous film and I use films like that in my classroom because I have access to about 200 students a year and by God I am going to try to mess with their minds. A little bit, I have no idea, you know, I'm gentle about it but I want them to be disturbed and to think a little more critically about, and of course, the reaction in my class is 'This is just a movie' and I say 'Well, not in this class it's not'. Nothing is just a movie in this class. So I think the cumulative effect is very important. These students are not watching informed news to the extent that they watch any news at all. They are watching Fox news if you know what I'm talking about. It's propaganda for the right and they are not really engaged and they know about global warming because they've heard about it where there is all this debate and we don't know for sure. So let's not worry about it since we don't know about it for sure. So I'm very concerned. I expose them to *Riverglass* and also to the worst of Hollywood because I've got to get them thinking about this. They often say to me 'You've spoiled my enjoyment of these films' and I say that's O.K.

Mark Nash. I wanted to bring in the participants from this morning into the final 10 minutes or so that we have because I was just thinking there were a number of connections to make, for instance, between the analysis of Hollywood films, say Jeremy's way he's been talking about his films for the BBC and I think it may be quite interesting to extend that work, particularly the opposition between realism and melodrama to analysis of natural history film making since Jeremy was talking about the older tradition which is the melodrama dramatic figure (people like David Attenborough) associated with that and then you have people like Jeremy who are in a sense are involved in a much more investigative, hard hitting if you like realistic and trying to get to the issues if you like and not allowing those preconceptions to cloud the picture and it would be interesting to know how people, what use in a

sense people make of those films because there is a slightly different critical apparatus for television than there is for mainstream cinema. So the research you do when mainstream films come out is slightly different for mainstream television films – you have audience ratings, you have some letters you get back from them but from my limited experience in making films for television you put it out then nothing happens and that's no big worry or if you get five letters and people say 'that's amazing'. I don't know to what extent any of these commissioning decisions that are made are based on any sense of having engaged in research with the audience in that way.

Jeremy Bristow. There is a value now that certainly the BBC knows it needs to seek beyond the sheer number of people that actually watch the film and there is what they call the AI rating which is a panel of people that for so many thousand people that respond give out a rating of how good it was. It varies between in the 70 which is pretty good to in the 80's which is very good out of 100. But recently they've gone beyond that, they want to see if there's an impact that goes beyond those ratings that somehow it's been picked up in the newspapers but the debate carries on. Certainly, I find it gratifying to hear people talking about it in the pub so you know they've seen it, they don't know who the hell you are but they are talking about the issues that you've raised. Then you know that you've got there – there's nothing scientific about that but if there is a debate that's going on, if it's been picked up by the newspapers and if there are letters following after that. Also what is quite interesting is obviously with films now, there are web sites and you can see how many hits there were on that web site and see how long the debate continues and so there are ways in which, if I'm answering your question, where you can see there is an impact beyond that. One thing that worries me having attended a few films festivals, not at lot, not the big ones like Wildscreen and Jackson Hole but the other film festivals and you see these wonderful films doing the rounds and you think 'where else do they go?' I'm really glad to hear that your film Andrej got shown by Arte because it could just be that the BBC will show it. Just. It's not out of the question but you'd have to get them on a good day. You have to be daring enough to do it which reminds me that I don't know whether anyone knows when Discovery were just launching themselves in Britain and they kind of put up the channel, like it was Channel 32 and it just had Discovery on it and they got hold of a guy who had just sampled tapes of birds and for about 2 months they just played continuous bird song. This became a mini cult in itself and people just listened in. It's the same things but totally auditory but that was quite a success. It had a registered audience just turning on listening to the bird song. But going back to film festivals, you get these wonderfully made films which people have put their all into which are superbly done and right in the old traditional filming making way and you see these same people going around and there are rewards etc. at these

festivals but you do wonder where do they go, who are they changing, whose minds are they changing? Ultimately, the other thing is, in terms of what we do, where are we targeting the audience? I mean it is so much better, as we were referring to at lunch, if films can be taken back to the place where they were made. In particular, indigenous people, local people, and shown back to them. I suppose Paul I'm interested in comes back to this impact in a sense, can you make a difference. And so much of it actually I feel sometimes I am addressing the wrong audience, the British audience. OK they debate it, they discuss it and forget about it. I don't think anybody is going to change but what is being done and what is coming out of film-makers and conservationists is getting the films translated back into the languages of the areas where they were made and then sent back and shown to them and this really is a way forward I think. It is to take the films to where they will have impact and where they are going to court change and motivate people.

Paula Willoquet-Maricondi. Are your films available in the States? How would one in the States, I've never tried to acquire your films through the BBC.

Jeremy Bristow. You'd have to pay £70 - £80 to get hold of it andit would take you about 2 months.

Paula Willoquet-Maricondi. You see, that's one of the problems. I've lied a number of times in order to acquire films I wanted to show simply because it's so difficult to get a hold of them and when you can, they're so costly that our school budget cannot afford it.

Jeremy Bristow. I think what you have to do – and it works nearly 100% - is find the name of the producer, write them a nice letter and make sure it's the American MTSE format rather than the British one but we have the capability and it's just a matter at some point of slapping in the digi Beta into somewhere and getting the MTSE and we can do this, it's just a matter of time, so normally if you hear about a film that you're interested in, find the producer, try and locate them, get them a letter, find the e-mail and nearly always they'll respond and it's a lot cheaper.

Mark Nash. Well, it is quite a bit cheaper but I mean I tried that the other day and I discovered that the budget is so small that they're having to charge not £30 but £40 to make the copy.

Jeremy Bristow. It's a slight hassle but if the letter is going to someone you know it can work.

Mark Nash. Absolutely. There is one question here that I wanted hear and then to bring things to a close and move on to the next session.

Question. Hello, two quick questions. The first is can I buy *Riverglass* – is it for sale?

Andrej Zdravič. Yes

Same questioner. OK. The second question is to do with ratings. I understand the importance of ratings and I understand, and I used to be teacher, the importance of being quantitative and justifying improvement and everything else and justifying the production. But isn't there a danger with ratings that the democracy within the ratings system could actually mean that we lose art to popular culture and it ends up being what people want to see and we lose the independent films that need to be aired? Well I believe need to be aired. Thank you.

Andrej Zdravič. I would just like to briefly follow up on the ((discussion about)) Hollywood films and ((people who)) say it's not too bad, it's just entertainment, but I think it's not to be taken lightly. I think Hollywood is making a huge impact in the way people perceive the world, and everything becomes a commodity and nothing has any value, it's all big heroes and it's kind of a subversive packaged affair that is invading all media, television as well, and I think it creates a very de-sensitised population. I think it has a huge potentially damaging affect and it already done. One last thing, Jonathan Carr-West said today in his very informative lecture that artists do not have accountability while scientists do and I think that artists have huge responsibility and I think that these people in Hollywood and whoever is making movies should think about what they are doing because media has a huge impact on people and I am especially referring to violence. I think the damage they are doing to the world is enormous so we do have a big responsibility.

Mark Nash. Thank you Andrej. I also wanted to add as a footnote as I haven't brought Timothy into this discussion that in a way the work of Timothy and Reiko and that group in Pittsburgh could be seen as the sort of very kind of enviable exercise of accountability and responsibility in a sense taking over something which the local state isn't doing. I want to, if you don't mind, draw things to a close now because in a sense there isn't a close, this is part of an ongoing series of debates and discussions. We hope that this will be reflected in the website that the RSA will be developing and, as Michaela has said, there will be other events later on and she is coming down to the front now to sort of lead us off Piper of Hamlin like to a couple of other events around the corner. I think we have managed to raise a whole lot of really fascinating issues from a range of different perspectives, both academic and artistic perspectives and so I'd like everybody to thank all the contributors and I look forward to hearing more from you all over the coming months and years so thank you all very much.

(Applause)

Michaela Crimmin. I just have to say that this absolutely has to be a continuum and I have been pulled up short, quite rightly, you know

there is a lot of work going on that's not always visible to me and the work that we're doing is not always visible to other people and so on so between us, I think it's really important that it is all incremental and is increasingly joined up in some sort of way I mean I would hate to lose so much of the ground that has been covered today. I know that I have changed a lot, I had a crisis of confidence last night and I'm sure there will be many more and I think there have been a lot of things today which have been constructive actually so keep in touch. We do need to move now quite fast and it would be great if you came too to the IMax to a different audience and a different agenda to some degree but before we go, of course, on behalf of the Arts Council, The RSA and all of us, I'd like to give a very big thank you to Mark for bringing us all together around these issues. Thank you Mark.

(Applause)