Narrating the Natural History Unit: Institutional orderings and spatial strategies

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Abstract

This paper develops a conceptualisation of institutional geographies through participation observation and interviews in the BBC's Natural History Unit, and the approach of actor network theory. The methodological and theoretical tenets of actor network theory are examined for the insights they offer for understanding the achievements of this pre-eminent centre for the production of natural history films. The scope, scale and longevity of the Natural History Unit is analysed through the means by which localised institutional modes of ordering extend through space and over time. Drawing on empirical material, the paper outlines three different modes of ordering, which organise relations between actors in the filmmaking processes in different ways: prioritising different kinds of institutional arrangements, material resources and spatial strategies in the production of natural history films. Through these three modes of ordering, and through the topological insights of actor network theory, a series of overlapping and interlinked institutional geographies are revealed, through which the identity of the Unit as a centre of excellence for wildlife film-making is performed.

Keywords: Institutional Geographies, modes of ordering, media organisations, natural history filmmaking.

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Introduction

In this paper, I give an account of the institutional performance and spatial achievements of natural history filmmaking. The paper considers how the spatial flows of natural history filmmaking, which direct images of wildlife from the field to the television set, are facilitated through the organising practices of natural history filmmakers. It draws upon my engagement with actor network theory and participant observation and interviews within the BBC's Natural History Unit (NHU) in Bristol. Natural history films are potent bearers of meanings about nature in contemporary culture. They construct a purified image of nature, separating the human and the animal, narrating stories of animal evolution and human discovery, gaining authority through their associations with science and the naturalism of their filmmaking techniques (Davies, 1998; Crowther, 1995; Whatmore, 1999b). The genre of wildlife programme making at the Natural History Unit has shifted subtly over its forty-year history. However, the continued success of programmes such as *Wildlife on One* (from 1977), the *Natural World* (from 1983), and David Attenborough series from *Life on Earth* (1979) through to *State of the Planet* (2000), demonstrate it has amazing endurance. In seeking to explain the scope, scale and longevity of this centre of filmmaking, I explore the means by which localised practices of filmmaking in the Unit are able to endure through time and extend over space. The NHU has, over time, achieved the distinctive and stable geography of a centre, concentrating the production and distribution of programmes from all over the world within the Unit in the UK.

My conception of these institutional geographies of natural history filmmaking draws upon geographical engagement with non-representational theories (Thrift, 1996), geographies of knowledge (Livingstone, 1995) and the organisational analysis of John Law (Law, 1994). It develops an understanding of the representational practices of the BBC's Natural History Unit through modes of ordering that fix flows of heterogeneous materials over multiple

spaces, creating and translating knowledges about natural history. I introduce three modes of ordering within the NHU which enable it to maintain the diverse relationships between individuals and resources that perform this institution. These orderings are narrated, debated and embodied by filmmakers and other actors involved in the processes of natural history filmmaking. The modes of ordering have a dual nature. They are both narratives of institutional history and devices of organisation, legitimation and authority in the practices of contemporary filmmaking. They are used to make sense of and validate different roles and associations within the Unit. Each mode of ordering has a spatial effect; constituting a different institutional geography which prioritises particular spaces in the production of natural history films and creates distinctive flows of material and information over space. Lastly, they function as resources which individuals mobilise in debates about the values and futures of natural history filmmaking and their own careers. Different modes of ordering enjoy prominence at different periods in the Unit's history and within individual career trajectories, but all are essential to understanding the contemporary form and dynamics of the networks that constitute the BBC Natural History Unit.

The paper is organised into six main sectors. Firstly, I explain the spacing or housing of the Natural History Unit. Secondly, I introduce my applications of actor network theory to the study of institutional geographies. The empirical sections of the paper introduce the many actors of natural history filmmaking and allow them to elaborate on the processes through which they organise their worlds. Three different modes of ordering emerge from these accounts: that of the amateur naturalist, the producer and the television manager. These modes of ordering play different roles in creating stability within the purified images of natural history programmes and the institutional achievements of the NHU. They are articulated through distinct historical periods, yet each has contemporary resonance in creating links between the actors and spaces in the networks of natural history. Finally, in concluding I demonstrate that through these three modes of ordering and the topological

insights of actor network theory a series of interlinked institutional geographies are revealed, through which the identity of the NHU as a centre of excellence for wildlife film-making is performed.

Introducing the Natural History Unit of the BBC

The NHU is located in Bristol, part of the regional broadcasting facilities of BBC South. The Unit was founded in 1957 following collaborations between the radio producer Desmond Hawkins, newly relocated from London to Bristol after the war, and the broadcaster and naturalist Sir Peter Scott, involved in setting up the first Wildfowl and Wetlands Trust reserve at Slimbridge on the Severn Estuary. Historically, the Unit flourished at a distance from the arts and politics based administration of the BBC in London. It has nevertheless developed a pre-eminent position within public presentation and discussion of BBC programming; in the words of one filmmaker, 'we are the jewel in the BBC's crown' (John Sparks, 13.6.95). In 1992 BBC South was designated a Centre of Excellence for natural history filmmaking, a recognition of the achievements of the NHU and the continued commitment of the BBC to this genre[1]. Current head of department Alastair Fothergill explains, 'we are in a very lucky position because we combine two [sic] things for the BBC. One is audience figures and the other is public service broadcasting. We also attract money. So of all the factual departments we are very lucky' (Alastair Fothergill, 16.6.95).

The NHU is housed in a row of converted Victorian terraces, forming one side of the large block of land on Whiteladies Road occupied by BBC South. Access to the site is through imposing portals of renovated Georgian architecture, where you enter a spacious reception area and are led through a efflorescence of later building, housing canteens, editing suites, BBC South library facilities and press offices, to the NHU. With a security pass you can enter by the less assuming vehicle entrance, walking past car parks, post room and studios to

the back door into the row of terraces housing the Unit. The interior of the Natural History Unit itself has no obvious reception or structure. The physical spacing of the Unit is fluid, with production offices for domestic television, radio programmes and overseas commissions chaotically dispersed throughout the interlinked buildings. These are established and dissolve according to the differing periodicity of programme production schedules.

The Unit houses about 200 people, many of whom will have spent their whole career within the Unit[2]. Few, however, will be in the buildings at any given time. Filming schedules require production assistants and directors to be in the field for one day to several weeks. Editing is completed in newly built facilities elsewhere on the BBC South site. Producers and managers are to be found at commissioning pitches, sales meetings or management gatherings in London, and across the globe. The stable points in this shifting geography are two rooms located opposite each other on the ground floor of the middle terrace: the offices of the head of Unit and the Unit library. Both are key sites around which other activities in the Unit are ordered, and both were important points for my entry into the worlds of natural history filmmaking.

Starting in 1994 and finishing in 1995 I spent ten months associated with the NHU in Bristol. I entered through the NHU film, sales and research library. From this point I traced the flows of ideas, expertise and film around the Unit as researchers, producers, managers, camera operators, technologies, and animals attempt to impose their order on others, and the implications for the images of nature that result. The importance of history to the Unit was emphasised through this point of access, where the Unit's collective identity is constructed and filed for future reference, story research and programme sales. With permission from the head of Unit I then moved out of the library, following various individuals and strands of programme making into production offices and management meetings. In tracing actors out of the library I encountered other ways through which the histories and current practices of

filmmaking were interpreted and performed. The three stories about natural history film-making forming the empirical sections of this paper are those told to me through informal conversations and semi-structured interviews, recorded in archived documents at the Unit, and analysed through the language of actor network theory.

Network Analysis and Modes of Ordering

Actor network theory is about decentring. It develops a strand of social theory that destabilises the subject in explanations of social organisation. Rather than starting from traditional sociological categories, such as institution, individual, economy or culture, it views these established tenets as the precarious achievements of potentially reversible patterns of association, or networks. Such distinctions are understood as effects or outcomes of situated practices. They are not given in the order of things, but emerge from a decentred network composed of all manner of actors and entities. The 'network' of actor network theory draws attention to the decentred subject in the networks through which social life are constituted. The 'actor' however, brings to mind the processes through which associations between entities are created. If networks are pools of order where relationships have achieved stability through space and time, it makes sense to ask how is this order created and through what strategies is it maintained. Work following actor network theory has tended to explore 'the struggle to centre and order from a centre' (Law, 1999), through 'centres of translation' or 'calculation' (Latour, 1987) within a decentred network. There is thus a tension between 'actor' and 'network' in actor network theory (Latour, 1999). This distinction is resonant with tensions between structure and agency more generally (Murdoch, 1997), and between individual and institution in organisational analysis (Chia, 1995). With its discussion of actors, networks, centres and decentring it recasts these often hierarchical relations within topological understandings. This has been the basis for criticisms of the

levelling or non-political stance of actor network theory, but for an exploration of institutional geographies it is a potentially productive elision.

In its own terms it makes little sense to categorise and summarise a coherent body of literature that is actor network theory (or its convenient, but even more singular moniker ANT). Its proponents would rather see it is as a critical dialogue between a variety of positions including post structuralism, the sociology of scientific knowledge, feminist science studies, ethnomethodology, organisational analysis and, increasingly, human geography. (See for instance, the seminal works of Callon, 1986 and Latour 1987, 1993; and the geographical applications of Thrift, 1997 and Murdoch, 1997). In common, they ascribe to and extend the semiotic insights of post-structuralism on the relationality of meaning in language, to include the relationality of all entities. Variously called 'materialist semiotics' or 'relational materiality' this holds that all entities are produced in relations (Haraway, 1997; Law, 1994). Order, categories and entities emerge from relationships, they do not pre-exist them. For actor network theory the characteristics of entities and relations are contingent upon the configuration of each network[3].

Actor network theory extends the register of semiotics beyond traditional concern with signification as linguistic ordering, to encompass all kinds of message bearers and material processes of inscription such as, technical devices, instruments, bodily capacities, habits and skills (Serres, 1995). It follows an explanatory logic based around verbs rather than nouns, concerned with the processes through which social life is performed, rather than describing moments of stasis. If entities are located within relations, then they are performed by, in and through these relations (Law, 1999). If relations do not hold fast by themselves they have to be performed, and much work on actor networks is concerned with how durability is achieved (see for example Latour 1988; Law, 1994; Whatmore and Thorne, 1998). The process of building and maintaining any network is a performance. Successful performances

require the raw material of network building to be put - and held - into place by being made to perform together.

The methods of actor network theory focus upon reconstructing interactions and positionalities, demanding an engagement with the living spaces of social life. The case study is the commonest exemplar of actor network theory. These include research on the production of knowledge within laboratories and research bodies (Latour, 1987; Law, 1994); government institutions and economic organisations (Latour, 1996; Hinchcliffe, 1996; Murdoch and Marsden, 1995); latterly incorporating a wide range of locations through which order is pursued in socio-technical networks or the hybridised relations between nature and culture (Bingham, 1996; Whatmore and Thorne, 1998; Whatmore, 1999a). These case studies are often approached historically. Since it is impossible to follow actors everywhere, networks have to be reconstructed retrospectively (Murdoch, 1994: 22). These histories look back to points prior to the stabilisation of networks, following the transformations of actors and entities in their construction. In this way contemporary order is not treated as given, but as the historical outcome of many different and negotiated processes of ordering (Law, 1994). The role of the researcher is to follow the actors, record what they are saying and trace their transformations. 'We let them show us where to look, what material they use in the course of network construction and how they come to be related to others' (Murdoch, 1994: 23). The achievements of the network are explored using the vocabulary of the actors that built them; the texts of actor network theory are hybrid, partially derived from the actors under study (Murdoch, 1994: 23), and partly through the practices of the researcher.

This approach to understanding the organisation of social life increasingly resonates with literature in organisation studies; part of an identified shift from modern to postmodern organisational analysis, or from distal to proximal modes of thinking (Chia, 1995; Cooper and Law, 1995). This duality is used to distinguish between modern or distal sociologies of

'being' or static states which treat organisations as given entities, and proximal or post-modern sociologies of 'becoming' which privilege an ontology of movement and emergence. The latter challenges the very idea of an organisation itself. 'How does it come to acquire its apparently concrete status? What primary organizing process allows it to take the semblance of an "already constituted entity"?' (Chia, 1995: 595). Attention is directed to the local ordering which produces the phenomena of organisation. In his study of the Daresbury government research laboratory, Law draws attention to the multiple 'modes of ordering' that actors within the laboratory use to organise other actors around them (Law, 1994). These modes of ordering emerge from the stories people tell about the history of the laboratory, their responses to contemporary challenges, and the varied practices they perform. Different modes of ordering define the actors around them in particular ways; 'they attribute causes, date events, endow entities with qualities, classify actors' (Latour, 1988: 10). They construct certain kinds of network association through 'defining actors that surround them - what they want, what causes them, and the ways in which they can be weakened or linked together' (Latour, 1988:10). Modes of ordering are 'self-reflexive logics that are not simply told, performed and embodied in agents, but rather speak through, act and recursively organize the full range of social materials' (Law, 1994: 109). It is through these competing, but interlinked, modes of ordering that the institution of the Daresbury laboratory is performed.

Modes of ordering are thus more than mere stories; they actively organise relations and generate materials, including the role of non-human actors within networks. These non-human agents are important in considering how modes or ordering create pools of order from which wider organisation emerges. The orderings of individual human agents are limited in scope to interactions within one location (Strum and Latour, 1987). Non-human agents, given meaning within locations and incorporated within networks, have the potential to imbue them with stability by enabling localised orderings to organise others distant in time and space. Actor network theory suggests that numerous inter-connected agents, variously

composed of biological, mechanical and habitual properties and collective capacities configure social life. By combing the insights of actor network theory with a 'postmodern turn' in organisational analysis, institutions can be viewed as heterogeneous networks, created through reflexive and recursive modes of orderings, enabling as well as disciplining, but always in a process of becoming.

This approach has implications for a geographical conception of institutions. Modes of ordering have spatial dimensions: 'they may have effects of size' (Law, 1994: 110), and 'they may generate and perform distributions' (Law, 1994; 111). Geographers have explored the essential spatiality of actor network theory (Murdoch, 1997; 1998). This is evident through its methodological focus on material and social practices in place, and theoretical explanation derived from localised orderings and situated knowledges. Secondly, actor network theory explores how local orderings extend over space; spatialities are brought into being from the actors located within them. Complex geometries are achieved through the associations of human and non-human actors as they order others around them. Any assessment of spatial qualities is simultaneously an assessment of network relations. As Murdoch explains, actor network theory insists that spatial analysis is also network analysis (Murdoch, 1997: 332). By constructing relations between entities in different ways, each modes of ordering can be seen to embody a different spatial logic, privileging locations within organisations and generating different spatial effects.

These simultaneously located and spatialised modes of ordering are a valuable route into understanding discussions of the historic and contemporary forms of the NHU. Three particularly commanding narratives emerge in the stories of natural history filmmaking told to me. Each tells a coherent story about the associations of natural history filmmaking and the institutional development of the NHU. Each represents a different mode of belonging to the Unit and performs a distinct ordering of the practices and technologies of natural history

filmmaking. They are articulated historically, for these modes of ordering are given shape and significance through their association with key moments in the development of the Unit. However, their legacy is not merely historic. John Law suggests that successful ordering requires workable representations (1994: 25) and these stories are essential discourses in legitimating contemporary relations of natural history filmmaking. These stories are rehearsed around distinct roles in the production sequence; however, each mode of ordering has implications for every stage of the production process. Individuals may perform each of these modes of ordering at particular stages in their career. Finally, these modes of ordering are not only discursive, but also material. Although represented here in the conversations of filmmakers, these narratives have non-linguistic equivalents in the roles, spaces and material processes within which narrators would locate themselves[4]. Together the orderings of the amateur naturalist, producer and manager secure translations between diverse actors and perform overlapping institutional geographies, constituting the stable actor networks of natural history filmmaking centred on the NHU.

The amateur naturalist film-maker

> 'I reckon the best wildlife films have always been made by people who were best with their subjects, who were right up to their necks in it. People like Eric Ashby - I think he is the classic example of the Desmond Hawkins technique, of a *real* person who is completely at home with his subject. You can call him an amateur film-maker if you like, but by the time you put him through the editing and production process I think his material is as good as anyone's. And the reason is that he is prepared to spend a great deal of time setting it up, his foxes are *real* foxes.'
>
> (Tony Soper, quoted in *Wildlife Jubilee*, 1982: 7, emphasis added)

One of the founding members of the Unit, Tony Soper, provides an introduction to the period, people, places and values embodied for the first mode of ordering I discuss. The role of the amateur naturalist filmmaker is most often articulated through reference to early post war natural history filmmaking. This period of programme making, and the identity of the naturalist filmmaker, tells of the educational ethos and naturalist skills originating the capture of images of animals for broadcast on television. The public service broadcasting values of early television, and belief in promotion of scientific citizenship provided opportunities for the radio producer Desmond Hawkins to exploit his links to the natural history community and establish a space for the presentation of natural history on television. Programmes that epitomise this period valorise the scientific discoveries of European ethology and mirror the aesthetic of close detachment championed by the Collins *New Naturalist s*eries (Matless, 1998: 228). Programmes were valued not for their financial achievements or audience ratings, but for the contributions they made to a more moral order of science and citizenship, increasing and communicating knowledges about the natural world through the visual medium of television.

What is stressed in the ordering practice of the naturalist filmmaker is the importance of field craft, the relationship with the animal in the wild, collaborations with scientists, and transmitting an enthusiasm for this vision of nature to the public. This mode of ordering emphasises time and immersion in the subjects of natural history by 'real' people, who are not only skilled in filming, but also experts on their subjects, with the naturalist's ability to observe the natural behaviour of wild animals in the field. The animals are 'real' animals, located in their natural habitat, as opposed to filmed in the studio or zoo. Direct experience with animals in the field is highly valued as a personal experience, as well as constituting a privileged site for the generation of knowledge about animal behaviour and a guarantor of the authenticity of film footage. (See Haraway, 1989, for a discussion of film and the empirical field tradition in primatology). Although articulated around discussions of the earliest period

of natural history filmmaking, this mode of ordering still has immense purchase on the individuals, ethos, and entities involved in natural history filmmaking. An historic and lingering association with science is the cornerstone of the NHU's continued delivery of public service broadcasting values. The relationship with scientists sustained through this history not only provides access to the stories and animals that feature in their films, but also underpins a commitment to naturalistic forms of filmmaking, the key to the legitimacy and authority of this documentary form. Drawing on a scientific background is also the route into natural history filmmaking for most new recruits to the NHU.

This mode of ordering stresses the historic and close association between scientist and filmmaker. As one of the longest serving members of the NHU, John Sparks indicates, 'if you go right back to some of our early programmes […] they were the results, very often, of amateur film-makers, but they were naturalists. They were scientists as well, some of them' (13.6.95). The ability to capture sequences of animal behaviour in the wild on film was more important than skills in producing television programmes for early filmmakers, and a number of individuals moved between the worlds of animal ethology and natural history filmmaking with apparent ease. A selection of predominantly European and English film-makers, such as Heinz Sielmann, Niko Tinbergen, Eric Hosking and Earnest Neal, were simultaneously involved with developments in animal ethology and the filming of animal behaviour[5]. The efforts of broadcasters, like Hawkins, were directed to finding suitable film through informal networks centred on post-war naturalist associations such as the British Ecological Society, the British Ornithological Society or the Royal Society for the Protection of Birds. The first natural history programmes featured film often shot by naturalists or scientists themselves, apparently offering little concession to the medium of television.

The naturalist filmmaker is thus distanced from the business of commissioning television programmes, from concerns about audience share and from the production offices of the

Unit. Naturalist filmmakers rarely talk about television, and when they do it is often with barely concealed disdain. Audiences exist as a shadowy, but motivating, presence for which a powerful and individual experience of nature is constructed. This mode of ordering emerged in a period when the BBC did not collect audience figures: the BBC was initially a monopoly broadcaster, and its educational ideals did not necessitate the direct monitoring of the public. For these filmmakers broadcasting from an *a priori* belief in expert culture and the benefits of educated citizenship still does not depend on audience measures; they look instead to the expert assessment of peers and scientific collaborators.

The shared belief in scientific citizenship and the value of public service broadcasting supported the relationship between broadcasters and scientists, and fostered a process of filming animals which owed much to the pioneering practices of European ethology (Davies, forthcoming). The efforts of early filmmakers was directed to developing naturalists skills to gain in depth knowledge of animal populations and working with early camera technology to film sequences of animal behaviour in the field. The performance of the naturalist filmmakers creates a modest witness for nature, effectively enrolling the spaces of the field and images of animals into the institution of the BBC. However, these practices are demanding of time and skill, and the locations and subjects of these films were thus largely restricted to those habitats and animal populations known to these individuals.

The relationship between filmmakers and scientists at the point of filming not only serves to enrol the spaces of the field and the behaviour of animals into the networks of natural history filmmaking; it also stabilises the role of the camera. The practices of filmmaking in this mode of ordering follow a documentary tradition of naturalism, concentrating on capturing action on location with minimal interference. The creative work is involved in researching locations, building up in-depth knowledge and understanding of species or places, and collaborating with scientists to set up the shot. The material is largely unscripted and

minimally edited in post-production. Through its location in the field and association with scientific practices, the instrument of the camera is ordered as a scientific tool for the inscription of reality and charged with the ability to witness animal behaviour. Whilst other ways of researching stories and filming animals are now pursued, the public face of natural history filmmaking largely derives from this model. The authenticity and educational value of images of animals are achieved by stabilising a scientific role for the camera within the complex nexus of changing roles of the naturalist, the science of modern biology and media institutions.

Older filmmakers most explicitly espouse this mode of ordering. Nevertheless, the chance to work alongside animals and scientists in the field is one of the main attractions into natural history filmmaking for many contemporary members, even their current head. 'I wasn't a great television watcher, until I actually got into the business. I mean I got into the business because I wanted to be near animals and it seemed to be a good way to do it' (Alastair Fothergill, 16.6.95). However, whilst many filmmakers do still work in the field with scientists setting up shots and incorporating animals into the networks of natural history filmmaking, this is no longer the pre-eminent challenge for filmmakers who need to work across many different sites. Although attracted to the Unit for this role, many find themselves increasingly adopting other modes of ordering through their career. Gareth expands on this as follows.

> 'You're employed as a *biologist* to start with. That's why so many people in this Unit are actually biologists with zoology degrees or PhDs because initially you're not employed as a filmmaker you're employed as a biologist. But as time goes on you get more and more film experience and forget all your biology that you learnt. And it all becomes a bit of a sort of a haze from the past. And you then become a *filmmaker*. And, you get more and more directing experience, editing experience. You get to the

> stage where you're making the programmes. And you're employing someone to do the research for you.'
>
> (Gareth, NHU Researcher, 11.7.95)

The ordering practices of the amateur naturalist filmmaker, defined in the milieu of post-war naturalist clubs and early broadcasting, are still essential for the continued success of natural history filmmaking. They constitute an essential performance in situating filmmaking alongside scientific practices, whilst translating images of animals from the field to the centre of the Unit. However, their geographical extent is curtailed to a single location and with it the scope for programme innovation. The role of the amateur naturalist filmmaker is increasingly seen as the preserve of the new recruit, emerging from a scientific degree well able to communicate with scientists, but with much to learn about the processes of television production.

Television production and expanding networks

> 'Then there became a period when there were early producers who started forming the show for the NHU and you would look to people like Chris Parsons and John Sparks and Richard Brock. Some of them are still here, you know, and they were very influential in those days. Of course, David Attenborough is key, both as a producer and commissioner. […] The big break through was definitely *Life on Earth*. *Life on Earth* is one of the greatest television events ever globally.'
>
> (Alastair Fothergill, 16.6.95).

The practices of the television producer as a mode of ordering are most often articulated through discussion of the series *Life on Earth*. The importance of the producer originally emerged in a period of development at the NHU, which culminated in a series of thirteen

programmes telling the story of the evolution of *Life on Earth* in 1979. For many this is the golden age of wildlife filmmaking. Filmmakers from the NHU at the BBC, Survival on ITV and National Geographic in the States worked alongside each other, often without direct competition. They were supported by the comfortable duopoly of a British broadcasting system still dominated by public service values, and by educational quotas for American networks. There was a growing market for natural history films as television audiences expanded in the UK and overseas. Funding at the BBC was buoyant following the conversion to colour transmission and the introduction of a higher license fee. Increased BBC resources meant the NHU could invest in domestic programme production, and the growing overseas sales networks of BBC Enterprises enabled them to sell their product in North America, Europe and Australia. Natural history filmmaking could expand its scope unchallenged by television competitors, whilst still relying on good relationships with professional ethologists whose growing numbers provided access to animals at research sites all over the world. *Life on Earth* represented the coming together of scientific, film-making and broadcasting associations which enabled the Unit to stage a global natural history event, financed and screened internationally and telling an international story.

The links through which *Life on Earth* was achieved were managed by a new band of professional television producers who articulated a new broadcasting ethos. The ordering mode of the producer is a mediating rather than a guiding one, stressing the facilitating skills of television professionals, as opposed to the didactic ones of naturalist filmmakers. David Attenborough is important in this period as one of a number of professional broadcasters able to mediate between the different publics the BBC was increasingly trying to serve, and who began to define the BBC for its audiences (Kumar, 1977). For natural history filmmaking David Attenborough is key, not only as commissioner of BBC2 where he introduced the series *World About Us*, but most famously for supporting, writing and presenting natural history series like *Life on Earth* and *The Living Planet* which characterise this period. David

Attenborough exemplified the facilitating role of the producer in natural history, pioneering a search for stories from overseas scientists, translating their scientific expertise and access to animals into popular narratives of natural history and acting as spokesperson for the growing networks of natural history producers[6].

The producer is credited a vital role in the development of the Unit through introducing an expanded vision and sustained quality in filmmaking, unmatched by other wildlife programme making organisations. Elizabeth, a producer on an overseas series explains, 'Survival has gone along tramlines from the very beginning. It's had wonderful cameramen [sic], but they haven't really had producers' (15.7.95). The mode of ordering of the producer is a role performed and celebrated by many of the current NHU employees. Elizabeth is one its most reflexive practitioners. She explains her conception of this role. 'I often describe a producer as like a conductor, I have all the musicians, all the skills, technicians at my fingertips. It's up to me to draw the very best out of each one and put that together' (15.7.95). Elizabeth goes on to describe her role model for the performance of the producer, 'he'd listen to other people and he gave them and anybody else the opportunity to support him' (15.7.95). The producer's ordering mode is a generous role, modest about its own achievements, constructing itself as a listener, facilitator or conductor of people and technology. However, this modesty is ultimately underlain by a strong belief in the autonomy and integrity of the producer to mediate between disparate voices and communicate directly to the public. As Elizabeth describes, 'You've got to let a producer make their own programme because I can only make my programme. […] There is me making it, I must know who my audience is, and understand what my audience is interested in. And then in the middle I've got to match that' (15.7.95).

The role of producer in natural history filmmaking embodies a different set of people, places and practices from the naturalist filmmaker. In this mode of ordering contact with scientists

is diminished to the same status as other parts of the job. The scientific background of many producers enables them to maintain important associations with science. However, the producer is found less in the field, and more in the production office, library and canteen, networking with colleagues inside and outside of the organisation, finding stories and building contacts. The producer links together the elements required to produce international natural history stories, balancing the professional vision of the scientist with popular demands of audiences, no longer rendered invisible through prior commitment to Reithian broadcasting values. These organising practices emphasise production values beyond that of scientific citizenship, demanding evaluation as 'good' television as well as 'good' science. Finally, the organising processes of the producer are collaborative. Unlike the singular encounter of the naturalist filmmaker with the animal in the field, the role of the producer is based on social skills and personal contacts and is performed in a way that emphasises the connective spaces of the network.

The producer enrols new spaces into the networks of filmmaking, which extend its institutional geographies. Rather than pioneering the discovery of animal behaviour on location, they use personal and professional networks to orchestrate programme production across several sites. This achieved through spaces the producer inhabits and enrols outside of the Unit: travelling between scientific research institutes, production rooms of other programmes, the sales offices of overseas commercial television channels, and a growing numbers of wildlife filmmaking festivals. New distribution networks, production units and film libraries are created through the ordering practices of the producer, which accentuate the ability of the Unit to mobilise its expertise at a distance. These facilitate movements of material - finance, film, film crews, filming technology and animals; and transfers of information - ideas for films, animal behaviours and locations, audiences measures and finance deals. At the centre of these networks the NHU library becomes a focal point through which flows are articulated. It is the point of contact for research into subjects, the

place to discuss ideas and identify contacts, the point from which audience research figures are disseminated, and the point of access for the archiving and sale of completed films.

The programmes that emerge from these orderings practices are no longer restricted to a single filming location, but bring together footage from all over the world. The genre of wildlife programme developed still owes something to the association with science developed through early films, but filmmaking practices where the effort of filmmakers is invested in being in the right place at the right time to witness animal behaviour cannot be sustained for such large series. Instead, relations are stretched over space by dividing expertise for finding animals, filming animals and making television programmes between the increasingly professional activities of animal ethologists at research sites, dedicated natural history camera operators and natural history film producers. The point of inscription in the field is distanced from the production offices by the organising practices of the producer, allowing several filming locations to be managed for each programme, a practice funded through reselling this footage overseas. The success of these programmes is recorded in overseas sales, high audience shares, and high appreciation indices[7]. Although the producer constructs this role as merely intermediary - a process of transmitting material between the spheres of science and television - the producer in fact mediates between them. It transforms what it connects: the producer's mode of ordering 'is an original event and creates what it translates as well as the entities between which it plays the mediating role' (Latour, 1993: 78). The expanded spatiality of networks facilitated by the producer is, however, ultimately bounded by the configurations in which it emerged: removed from direct competition, aided by in-house resources, and with the singular vision and centralised control of the producer.

Prior to the BBC charter renewal in the early 1990s there have been challenges to the ordering practices of the producer. This is most evident in the introduction of Producer Choice, which created an internal BBC market for resources previously held in-house. Many

producers were brought into direct and public conflict with a new mode of ordering exemplified by tariffs, review processes and performance indicators. In a speech to the British Association for the Advancement of Science in 1992, the former head of Unit, Andrew Neal suggested the changes accompanying Producer Choice had resulted in a loss of producer creativity. He explained, 'I believe in Producer Choice, but what is happening is that everyone is being set new tariffs for programmes. This is the opposite to Producer Choice. It shows that the powers that be do not trust the producers […] I was spending 50 to 60 hours a week on bureaucracy, related to the changes taking place. I'm a creative person, and I'd had enough [...] Creative people do not like being told what to do by accountants' (Andrew Neal, quoted in Brown, 18.9.92). Shortly after this speech, Andrew Neal publicly handed in his resignation.

Andrew Neal was one of several producers who left the Unit shortly before my period of research. Mike Andrews, another long time producer of the NHU, also quit, commenting that his job had become financial dealings to support programme making for the BBC; dealings that brought no personal gain and involved little job security. With the erosion of producer's role he was pessimistic about the future of wildlife filmmaking as a whole. He also indicated the emerging importance of a new mode of ordering: the practices of the television manager.

> 'The industry as a whole is in recession because it is flooded with wildlife films and our co-producers in America are having difficulty raising funds. So it's a fairly bleak scenario. The crest of the wave broke with Andrew Neal. Now it's a question of either retrenching and operating on a smaller and much more efficient scale, or going downhill. I wouldn't envy the job of the new manager at all.'
>
> (Michael Andrews, quoted in Askew, 23.10.92:10).

Managing the networks of television

> 'A huge cheer went up at the BBC's world famous Natural History Unit last week when it was announced that 32 year old Alastair Fothergill had been appointed its new head. This popular decision provided a much needed boast in a department that has had little cause of rejoicing recently.'
>
> (Askew, 23.10.92:10).

The final ordering process in the production of natural history filmmaking I discuss is that of the television manager. In the early 1990s the BBC underwent a series of high profile changes in structure, management and ethos. Political pressure on the BBC intensified in the ten years up to its Charter renewal in 1996, and government drives to increase accountability, efficiency and competition mean that managing enterprise and performance emerge as key skills within the networks of natural history film-making. Producer Choice introduces internal markets for resources and quotas for contracting out programme making at the BBC. The period also saw dramatic shifts in international media industries as production companies, distribution means and audiences fragment and competition intensifies. The response of the BBC to these pressures was 'Birtism'. The rise of John Birt to the position of Director General at the BBC in 1993 was felt throughout the BBC, as he centralised control, reordered management and promoted efficiency. The Natural History Unit, which had previously developed fairly remote from BBC executives in London, suddenly found itself firmly, but uneasily, incorporated into these broadcasting structures. The new language of efficiency, accountability and enterprise at the BBC made the high investments of time, people and money in natural history films difficult to justify. Compared directly to other documentary strands at the BBC, the genre of blue-chip natural history films are expensive. An article by Elizabeth Dunn in the *Daily Telegraph* quotes a 'Unit stalwart' who explains, 'you have got accountants sitting in London who've never made a programme. […] They

have found that what we call blue-chip natural history films seem to take an eternity in the field and seem to take a great effort and that the department is greatly over staffed for the number of programmes it produces' (Dunn, 23.9.92:12).

There has subsequently been a proliferation of discourses and practices concerned to manage flows of information and material through the established networks of natural history filmmaking. Whilst competition from international natural history filmmakers has curtailed the geographic expansion of the Unit's activities, the role of the television manager ensures close association with the discourses, spaces and technologies of management practices at the BBC in London. A new mode of ordering emerges concerned to increase efficiency by cutting production costs and increasing programme impact through monitoring and maximising the flow of material through the existing networks of natural history filmmaking.

A change in management style has pervaded the Unit. This is represented by the new head, Alastair Fothergill, and performed by growing numbers of managerial positions within the Unit. This has been accepted wearily by some, resigned to the inevitability of increasingly dominant financial measures in the processes of filmmaking. Jenny, a producer on a British magazine programme reflects, 'I think it is the same in any big organisation, in the 90s in that it has suddenly become run by accountants […] There's not a lot that we can do about that really' (21.7.95). However, for others the challenge it presents to previous modes of ordering in fact opens up new opportunities. '[Producer Choice] gives power back to the programmes - for too many years, the BBC has been a group of self-perpetuating oligarchies. In the past, I have been forced to use a particular editor rather than use anybody I want. The whole thing has been hidebound by rule and regulations' (Mike Beynon, producer at the NHU, quoted in Dunn, 23.9.92:12).

New links have been forged between the commissioning, accounting and distribution centres of the BBC in London through the practices of the television manager; the accompanying performance indicators and review processes extend these managing practices to all points in the networks of natural history filmmaking. Every point in the established networks of natural history filmmaking is centrally administered to maximise the accumulation of value from each part of the process. The ability to condense complex understandings of broadcasting value into financial indicators embedded in computer systems gives this mode of ordering huge scope to influence every space in the filmmaking process. The organising practices of the television manager are able to speak more clearly at each stage in the processes of filmmaking. However, increased clarity within the central organisation of the BBC results in decreased security of association at other points in the network. Prior relationships forged through shared scientific understandings or built on personal contacts are threatened.

First, there has been a shift in practices capturing animal behaviour at the point of filming. Replacing the high investments of time in the field is a growth in the role of the director managing the filming process. Through the use of scripts, storyboards and habituated animals in studios and zoos, animal behaviour is managed to increase the dramatic impact of films and reduce relative costs of filming. As Ben explains,

> 'There was this kind of awesome shift from the sort of gentlemen film-makers of the John Sparks era, where the idea was that you went out and set up the tripod and you waited. […] And the money was put into paying people's time to wait around for it to happen. [The director is] hands on, let's make it happen. It's a very much more pro-active style of filmmaking' (14.7.95).

In this mode of ordering, less time is spent in the field, and more in the library, production offices and editing suite ensuring stunning images of animals that can fitted into previously scripted dramas, minimising expensive periods on location. Programmes like *Lifesense* (1991) and *Supernatural* (1999) resulting from these processes are innovative; however, the practices through which they are constructed threaten important relationships with science. Iain, a producer on a British natural history programme, explains that in the move towards managerial modes of ordering associations with scientists suffer. 'You do come across situations where you say 'BBC' to scientists and they say sod off, because somebody has trampled on them. […] It's not you don't give a damn, it's because the next shoot is piling up on you' (19.7.95). This relationship to science is still important; it supports the field as a symbolic space where natural history films originate and upholds a commitment to naturalism, stabilising the ethos of detached observation despite the increasing interventions of the director. The NHU's associations with scientists, based upon trust, personal contacts and shared experiences, are threatened as media demands for efficiency demean the role performed by the naturalist filmmaker.

The ordering role of the television manager also permeates production offices where programme costs, previously impossible to account because of freely shared in-house resources, are now managed to allow direct comparison with external commercial competitors. Costs are calculated through the computerised Production Office costing system, 'that's the cost including everything, you know, down to the last penny' (Alex, programme budget assistant, 1.8.95). The role of the producer is increasingly incorporated within this mode of ordering, as personal relationships are replaced with costed production units, and the facilitating role of the producer is subsumed into the role of managing programme making costs. 'Much more than in the past, [you have to] be a money person. You should always have an idea of best use of money, and where it is going and how fast it is

going and if it's going too fast on one thing can it be shunted from somewhere else in your budget' (Anthony, 3.8.95).

The ordering practices of the television manager respond directly to concerns to make the BBC more accountable to its audience. In a period when BBC audience share will inevitably decrease through market fragmentation, the BBC has to defend its license fee by adding value. Whether this is through the values of public service broadcasting or increasingly through financial returns on sales of finished programmes, the television manager has to explore new means for maximising value from programmes within the flows of television. Efforts to increase programme profiles and audience figures are demonstrated by the rise of the media event. This brands a programme or scheduling decision in an attempt to increase the impact of the programme. In this mode of ordering the David Attenborough series is no longer the pinnacle of production skills in the NHU, but a valuable media event with a strong brand identity. As Alastair Fothergill explains,

> 'Everybody wants events, everybody wants something that people will write about. Natural history can provide it in probably two ways. It can provide it through the mega series, the Attenborough blockbuster, which is very special and everybody writes about. It also can provide it, I think, through live events like *Flamingowatch*, which is a bit like a theme night on BBC2. It's something special. It is something different. It's out of the run of the mill' (16.6.95).

Finally, the drive to maintain and develop their programme sales overseas has bought them into direct competition with other companies abroad. Global restructuring of supply and demand for wildlife films has turned collaborators into competitors, challenging co-production relationships established since *Life on Earth*. Companies in the United States, Canada, New Zealand and Australia, and to a lesser extent India and Japan, previously been

relied upon to support BBC productions, are progressively looking to increase their domestic natural history film production and to export their programmes to a world market. The growing commodification of wildlife programmes means that the television manager is increasingly involved in battles over copyright to police flows around the networks of natural history filmmaking. The NHU wants to able to invest in world rights for programmes, enabling them to recoup revenue wherever they are transmitted. 'You want to be a global player, you have to buy rights in all the world. Discovery want to be broadcasting all around the world, like the BBC do frankly, and so they want to have all rights' (Alastair Fothergill, 16.6.95).

The mode of ordering of the television manager has altered the institutional geographies of natural history filmmaking in a short period. From localised orderings in production offices to global struggles over copyright, the organising practices of the television manager have attained a global reach beyond the operation of other modes of ordering. Relationships that forged the networks of natural history yesterday, disappear from view in the emphasis on accelerating accumulation through circulating networks of natural history filmmaking. The final mode of ordering, with its language of enterprise, efficiency and accountability, erases the historical trajectory from which it has emerged. 'I don't think [the history is] at all important for individuals working here. […] I don't think you'll get people reflecting back. You know that's like any company, it's not really history. A company is a going concern, and that sums it up. Tomorrow will be different, actually yesterday doesn't really matter' (Anthony, 3.8.95).

Conclusions: Decentring the Natural History Unit

Having introduced three complex and interwoven accounts of the development and maintenance of natural history filmmaking, in conclusion, I summarise the main

characteristics of these modes of ordering before returning to the theoretical propositions of actor network theory to reflect on the value of this approach. Despite my separation of the three modes of ordering into distinct accounts, and the tendency of subsequent modes of ordering to erase the importance of former, all kinds of organisational ordering coexist. The naturalist filmmaker, revealing new footage of animal behaviour and working with the scientist in the field, still has a role to play in the institutional achievements of the Unit. In part this is now symbolic, for the Unit recognises its identity is secured through alliance with the values and moral order of science. In part it is 'black boxed' through the coding of the camera, carrying a commitment to naturalistic filming practices, despite radical shifts in filming technology. Many newcomers to the Unit take on this role. Programme researchers in natural history filmmaking are often from zoological backgrounds, charged with the role of maintaining contacts and flows of information from scientists in the field to filmmakers in the production centre.

The producing mode of ordering also retains its importance. The modest mediation between scientist and public features widely in public presentations of the practices of programme making. Filmmaking still involves the producers' facility to collaborate with large numbers of people, in diverse locations and centre their achievements within the NHU. However, the emphasis on personal contacts and individual autonomy is increasingly couched within managerial logics of ordering. The managerial mode of ordering has achieved a pervasive influence throughout the networks of natural history filmmaking, altering its spatial dynamics and boundaries. Indeed, that is its function: to put under scrutiny every link within the associations of filmmaking, ensuring that maximum value is circulated around them and value accrued from them. However, this desire for the centralisation of surplus value comes at the cost of weakening the elongated networks of natural history filmmaking, and its achievements are contested.

Historical periods are used to articulate the different values and important achievements of preferred modes of ordering, presenting resources which individuals have to negotiate in debates about the past and the future of natural history filmmaking. These multiple modes of ordering allow the NHU to meet the diverse claims made for its institutional performance as educational, committed to national excellence in public service broadcasting, whilst also generating overseas income. It also ensures resources for stability in the light of changing demands of BBC governors and government media critics, the shifting terrain of international media organisations, the growth and fragmentation of the biological sciences and the altered demands of audiences. However, as the focus of power between these modes of ordering has shifted hierarchies emerge within these stories. 'Each mode of ordering tells of ranking, and each tells of the (lowly status of?) other modes of ordering' (Law, 1994: 116). For the producer, the naturalist filmmaker vision is elitist and geographically limited; for the television manager the producer is inefficient and arrogant. For both of these, the television manager is cynical and operates with the inferior logics of commercial television.

These hierarchies emerge because some modes of ordering speak more clearly and more widely of more actors; they are more able to make explicit the links between the localised orderings in the Unit and the global reach of programme production and distribution now required. The naturalist filmmakers' location in the field, in dialogue with scientist, camera and animal is an essential node of natural history filmmaking, but its achievements are of limited scope; its spatiality is clustered around particular locations, animal populations or scientific research institutes. The producer's role is expansive and enrols many new entities and spaces into the networks of natural history filmmaking. The mode of ordering of the producer establishes the spatiality of a centre by inhabiting and incorporating diverse sites of filmmaking, enabling filmmaking that combines many locations, expertise and co-producers. However, these networks are opaque and vulnerable in a television environment that demands efficiency, competition and accountability. The managerial mode of ordering, with

its language of enterprise and performance indicators is able to create more certainty and transparency within the networks of natural history filmmaking. However, this certainty is only visible from some points in the network and comes at a cost to previously established relationships. All modes of ordering depend on previous, building on network associations already in place. The forms of spatiality expressed depend on prior configurations, but no longer at the forefront of developments in filmmaking the roles are stabilised and demoted. They are vital spatial components of an actively performed network, but no longer the point of innovation. None of these modes of ordering thus has intrinsic effects, and in another department, context or within another trajectory their achievements would be different. Latour suggests there is never an interaction that is not framed (Latour, 1999: 19), and these modes of ordering are always in motion. The narrations of the NHU illustrate the institutional orderings and spatial strategies through which the stabilities of the network are achieved. However, they also illustrate that it could have been otherwise.

This finally brings me on the role of the individual within the Unit. Throughout the organisational literature is an enduring duality between individual and institution. How much do individuals create the organisation, and to what extent are they shaped by it? In the language of institutional geographies, to what extent are the spaces individuals inhabit in an organisation of their own making or choosing? By approaching this question through a set of recursive modes of ordering rehearsed by individuals themselves I hope I have demonstrated there is no singular way of belonging to or performing the identity of the Unit. The institution of the Natural History Unit contains multiple and complex relational spaces, frontiers, and interfaces in which power is constantly being reformed and recreated. All entities within the institution have capacity for agency and each mode or ordering has a role to play in maintaining the stability of the Unit. There are tensions between individuals and organisational demands, which cause frustration or resignation, and hierarchies are evident in the processes of ordering. However, many of the voices represented in this paper

demonstrate that individuals recognise the variety and possibility of performing different roles at different times. The continued success of the Unit owes much to the ability of its members to move beyond individualistic attitudes towards agency and withstand the tensions of contemporary natural history television production and their own partial identities and contradictory voices. It is the localised and overlapping, contingent and contested orderings of material and people, located in the relational spaces of the field, the academic institute, the production office, the distribution centre and the living room that make up the decentred institutional geographies of the Natural History Unit.

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[1] This terminology emerged at the BBC in the run up to the review of the Corporation, published in the document *Extending Choice*, which cemented the organisation's public service broadcasting charter and ability to levy a universal license fee for another ten years until 2006 (BBC Corporate Affairs, 1992).

[2] The whole career of many of these people has been within wildlife programme making, some totally within the NHU. The NHU occupies an unusual position within the established pattern of television career paths. Whereas newcomers to children's television tend to set their sights on light entertainment, then drama; whilst others follow a paths from local news, to current affairs and national news broadcasts; natural history filmmakers tend to stay natural history filmmakers. The first generation of filmmakers are now mostly retired and two Unit pioneers, Desmond Hawkins and Johnny Morris, died in May 1999. However, aside from these few early individuals, many later cohorts are still active in natural history filmmaking.

[3] ANT does not deny the pre-existence of raw materials from which the relations constituting entities are constructed, rather that since definable 'objects' only emerge from the discourses which hold them in place within stable networks, the configuration of any entity is contingent upon its relations with other entities. Latour's most recent book, *Pandora's Hope* further explains his epistemological and ontological claims for actor network theory (Latour, 2000).

[4] The many individuals that feature in this paper are represented in the following way. Quotes from NHU archived sources of filmmaking literature or my own press cuttings are reproduced with attributions as published, since these are public statements. With my own research in the Unit several key individuals, such as head of Unit, head of library and long serving producers like John Sparks, were happy to be interviewed as named individuals. These individuals are used to managing the public face of the Unit, and I am happy to reproduce their names here. All quotes attributed to these individuals thus have both first and second name. Other members of the Natural history Unit are given first names only, and these are pseudonyms. I recorded interviews with around 20 'ordinary' members of the Unit, exploring their motivations, practices, hopes and fears for natural history filmmaking. Only a few of these are represented here. Partly, these are the most articulate; as Law suggests successful ordering requires workable representations (1994: 25) and the explanatory scope of these individuals often

exceeds their colleagues. Partly, it is for purposes of conveying a complex narrative in a relatively concise way.

[5] For example, Earnest Neal's work on badgers not only meant that he was a world renown expert on badgers, but that he was able to film some of their behaviour. Similarly, Eric Ashby's intimate knowledge of the mammals of the New Forest meant he was able to find locations where mammals were active in daylight and film their activity (Parsons, 1982: 106).

[6] *Life on Earth* took 3 years to make, and was filmed in over 100 location areas, in 40 countries in every continent, at a cost in 1979 of over £1 million. David Attenborough had written the script assuming that anything was filmable in the last event. This script was then taken out to relevant experts in over 200 academic organisations, and new research or extra problems accounted for. The series was transmitted on BBC2 at 8.10 on Tuesday evenings, and repeated at 7.15 on Sundays. The reaction indices for audience appreciation complied by BARB broke all Unit records; though viewing figures started from a relatively modest level they rose during transmission to reach a figures of 15 million by end of the series (Parsons, 1982: 352). It was co-produced by Warner Bros. and Reiner Moritz Productions, who purchased the rights for transmission in their territories whilst the BBC retained the rights to the rest of the world. *Life on Earth* has subsequently been transmitted to audiences of over 500 million people in over 100 countries (NHU publicity brochure, 1990).

[7] Viewing figures are expressed in million viewers, audience share and audience appreciation indices. The ITCA claimed a potential audience of 51 million viewers in 1983. Quantitative data are derived form a sample panel of 3, 000 homes. The sample is deemed to be representative as a result of an annual establishment survey of 20, 000 homes which establishes a national pattern of variables relating to population structure, colour television and VCR ownership. The television set in the house of each member of the panel is then fitted with a meter, which records how long, and to which channel the set is switched on. Methods of collecting this material have involved wax coated paper, dispatched weekly by panel members, through to electronic relay of information from every set overnight via telephone lines. The information is then compiled into reports that are sent out to BARB subscribers (Alvorado and Stewart, 1985).