



A grand day out: towards a mode of interrogation of non-school pedagogic sites

PAUL DOWLING and ANDREW BROWN
University of London

ABSTRACT

Interest is increasingly being taken in educational sites which extend or which are located beyond the school. These include sites associated with developing information and communications technologies and mass media organizations as well as institutions of longer standing, such as museums, galleries and so forth. In this article we shall deploy a sociological framework originally developed for the analysis of school texts to such non-school sites. Our focus will include considerations of heritage and conservation sites in the form of castles and zoos. We contend that in operating in terms of both pedagogic and exchange relations, such sites may have something to teach as well as something to learn from schooling.

KEY WORDS

edutainment; pedagogy; media; sociology; educational sites; text analysis.

INTRODUCTION

In the UK, recent educational and social policy (increasingly becoming one and the same thing) has placed ever greater emphasis on learning in non-school contexts. After-school clubs, breakfast clubs and holiday literacy projects have extended both the school day and the school year. Alongside this, the home has increasingly become constructed as a pedagogic site not only through the increased stress placed on homework (see Barber, 1996), but also the notion of parents as partners with teachers in the education of children (see Bastiani and Wolfendale, 1996). Parents are seen as both agents of



and, latterly, subject to official pedagogic action. For example, stemming from an expressed concern for the stability of 'traditional' family structures, proposals for 'support' for parents have recently been made which include the possibility of teaching parents how best to meet their responsibilities (see Home Office, 1998). The importance of family life to current social policy is clearly demonstrated by Home Secretary Jack Straw's statement that:

Family life is the foundation on which our communities, our society and our country are built. Families are central to this Government's vision of a modern and decent country. (Home Office, 1998: 2)

It is not just the government that has pedagogic designs on our home and our leisure time. As Sefton-Green (1998), among others, has pointed out, the growth of ICT use in the home has opened up the commercial market for home 'edutainment' products, mirroring school-based ICT developments evident in initiatives like the National Grid for Learning. All these developments, and the ever stronger rhetoric of 'lifelong learning' and 'the learning society', act to extend both the range of pedagogic subjects and the diversity of legitimate pedagogic sites.

Whether spending a day in or a day out, it is clearly becoming important to ensure that one's activity is seen as having some clear pedagogic potential. Primary school age children should, whatever the reservations of researchers, spend time doing homework lest they 'add another 20 more minutes to the two hours most pupils of that age already spend in front of the TV or playing a computer game' (Secretary of State for Education and Employment David Blunkett, quoted in the *Guardian*, 20 July 1999: 10). Similarly, our trips outside the home are open to evaluation according to their pedagogic potential. One grand day out is not necessarily equivalent to another.

The pedagogic potential of some sites visited in 'leisure time', such as museums and galleries, has been extensively explored (see, for instance, Hooper-Greenhill, 1994). Research in this area has paid attention to issues such as the nature of displays, modes of communication and the social characteristics of the visitors. Our interest in exploring non-school sites is somewhat different. Drawing on the analysis of school texts, we wish to produce a description of the nature of the social relations established in and through these sites as texts (see discussion below). Our contention is that, as non-school sites become of ever increasing importance in governmental and commercial educational rhetoric, it becomes important for us, as sociologists and educational researchers, to develop modes of analysis and descriptions that match the levels of detail and analytic power of our work on schooling.

The theoretical origin of our approach lies in Dowling's (1998) generation of a language for the sociological description of pedagogic texts. By 'text' we mean any empirical object of analysis. The approach to the text is to interpret it as participating in a particular *activity* so that it is this activity that gives

the text its 'meaning'. A restaurant menu, for example, participates quite differently in the activities of dining out, on the one hand, and school mathematics, on the other.

The analysis is sociological in that the activity is defined in terms of relations between social positions and practices. The initial concern is with *pedagogic* activity. This is defined as involving the transmission of a privileged practice between a transmitter and one or more acquirer positions under conditions in which the principles of evaluation of these practices reside with the transmitter. This is an ideal-typical description of a classroom in which there is a teacher, who can generate and legitimately evaluate specialist discourse, and students whom (and whose performances) the teacher classifies in different ways.¹

We must state two related caveats. First, 'position' is a theoretical category that does not correspond to the empirical teacher or student. The identification of a position emerges in the analysis of empirical data. The reader of this article will construct an 'author' that has (or lacks) certain competences and that is presuming a certain kind of 'reader'. This is the case even though there are, empirically, multiple authors and, it is to be hoped, multiple readers.²

Second, and as a consequence of the above, pedagogic activity is not the exclusive activity of any classroom. A teacher is not exclusively a transmitter and students are not exclusively acquirers. There are other things going on, as we shall illustrate in relation to the edutainment texts that we discuss below.³ The theoretical antecedents of this aspect of our approach include the semiotics of, for example, Barthes (1972, 1974, 1981) and Eco (1976, 1979) and also authors operating at higher levels of analysis such as Baudrillard (1993) and Foucault (1970, 1978).

Dowling's language enables us to analyse empirical texts – such as a school textbook – in terms of the ways in which they act as instances of pedagogic activities. Subsequent developments (see, for example, Dowling 1999a, 1999b and forthcoming) have led to the consideration of other forms of activity and specifically *exchange* activities, for which the location of the principles of evaluation of practices shifts to the acquirer. This is an ideal-typical description of a transaction in a shop. Here, the customer – the acquirer of an item – and the proprietor – the acquirer of currency – must both be satisfied in relation to, respectively, the use and exchange value of an item if transmission and acquisition are to take place. Both pedagogic and exchange modes of activity will be considered in this article.

Empirically, the referent activity of the original object texts was school mathematics. Among other findings, Dowling's analysis revealed the ways in which school mathematics texts constructed different 'myths' about mathematics and distributed these myths to categories of reader on what is essentially social class terms, the result being an effective translation of social class

into 'ability'. Here we shall focus on texts relating to non-school educational sites, specifically, two castles and two zoos. In general terms, our research question is, how do these sites construct via their texts' transmitter and acquirer positions and what are the nature and mechanisms of the distribution of practices between these positions?

The empirical texts are, in the main, official publications of the sites that are directed at visitors, including school parties. Mostly these are print texts, but we shall also make reference to some audio and video texts. In addition, the material organization of each site was interpreted as a text. Although we visited these sites and observed them 'in use', what we are presenting is a textual analysis and not an ethnographic study. The general principles that we are applying in this analysis are given in Brown and Dowling (1998) (see also Dowling, 1999a). We have not looked at all of the texts associated with any of these sites – indeed, given our interpretation of 'text', exhaustion in this sense is particularly problematic. The texts that we have chosen were among those given high 'visibility' by the institutions themselves. In this article we will be able to consider certain key aspects of only some of these texts. We are not, in any event, claiming to make generalizations about the sites as total institutions. We discuss the issue of generalization at the end of the article. The four sites that we shall consider, in turn, are: Bodiam Castle; Mountfitchet Castle; London Zoo; and Howletts Wild Animal Park.

BODIAM CASTLE AND THE MYTH OF REFERENCE

As we have suggested earlier in relation to the authorship and readership of this article, texts may be interpreted as constructing an author and ideal readers. We refer to these as textual *voices* that are realizations of the positions of the referent activity. The National Trust guidebook for visitors to Bodiam Castle – *Bodiam Castle: East Sussex* (The National Trust, 1991) – is an example of what we are referring to as a *transmission* text. That is, it constructs an *apprenticing* relationship between its authorial and reader voices. The privileged *message* of the text – the realization of the practices of the referent activity – may be described, first, as a strand of a national historical narrative. The castle serves as the focus of this narrative which is represented largely as a chronicle. So, Chapter one of the book, 'The wars with France', begins:

To understand why Sir Edward Dalyngrigge decided to build Bodiam Castle in 1385, one must look back fifty years to the beginning of the Hundred Years War. In 1337 the 25-year-old Edward III, already lord of the Duchy of Guyenne in south-west France, laid claim to the French Crown, considering that his mother, Isabel, the sister of the three

previous Valois kings of France, had been wrongly disinherited by her cousin, Philip VI. For the next hundred years this family conflict was fought out with a mixture of chivalry and savagery that is described most vividly in the contemporary *Chronicles* of Froissart. French and English lords, speaking the same dialect of Anglo-Norman French, fought one another with honour and civility; their subjects were butchered unmercifully.

Control of the Channel was important from the outset. . . . (The National Trust, 1991: 7)

Chapters one, two and three of the book present the narrative in terms of the political context and the construction and use of the castle. Chapter four extends the narrative in relation to the decline of the castle metered by a chronicle of its owners and culminating in its acquisition by Lord Curzon as the hero of its conservation.

This narrative strand is the product of a more general historical/archaeological discourse. The guidebook also incorporates strategies that construct the reader as an apprentice with respect to this discourse. This is achieved through the generic form and through the content of the text. For example, references are made to historical evidence in the form of contemporary chronicles and diaries – as illustrated in the extract above – and also by the use of contemporary paintings, drawings and sculpture. The text also includes a bibliography in academic form. Chapters six and seven of the guidebook offer descriptions of the castle and its setting in terms of archaeological interpretation:

The original bridge arrangements were first discovered by Lord Curzon, when he emptied the moat in 1919–20 and revealed the foundations for the wooden trestles which carried the bridges. (The National Trust, 1991: 34)

In the outer bay of the passage are doors into the two high-ceilinged guard chambers on either side. These rooms have joist holes about two-thirds of the way up the walls. The function of these is unclear, but they may have supported a lower ceiling with storage space above. (The National Trust, 1991: 37)

To the north of this pond the rather indeterminate earthworks below the south dam of the moat have been interpreted as the site of the mill, but its presence close to the centre of this carefully contrived landscape and in such a visually prominent position seems unlikely. It has recently been suggested by the [Royal Commission on the Historical Monuments of England] that there may have been a bridge here over a spillway between the 'Tiltyard' pond and a further small pond to the east.

This seems most likely, if one considers the care taken to stage the views of the castle to visitors approaching from Bodiam Bridge. (The National Trust, 1991: 58)

An indicator here of the academic genre within which the text is constructed is the use of hedging strategies (see, for example, Myers, 1992): 'there *may have been* a bridge'. As these extracts illustrate, the text does not simply rest on its authority, but presents an argument in support of its claims. Thus the historical/archaeological discourse is presented as an ongoing production and the text offers some introduction to the principles of this production.

This text is clearly mimetic (see Roberts, 1995) in that it constructs a reality – events and practices – that lies beyond its own description and that is approached via the productive work of the historical/archaeological discourse. From the constructivist perspective within which we are working (see Dowling, 1998, 1999a, 1999b; Brown and Dowling, 1998) this construction is aptly described as mythical. This is the *myth of reference*, the claim that the discourse refers to rather than constitutes or 'simulates' (cf. Baudrillard, 1993; Dowling, 1996) its products.

In terms of its material organization, Bodiam Castle constitutes what we refer to as a *regulatory* text. Thus the ancillary services and practices associated with a 'day out' rather than with historical/archaeological discourse are removed from the castle buildings. The ticket office is some fifty metres outside the moat and the tea room and public conveniences are several hundred metres away. There are teaching and video rooms within the castle, but their presence is signalled only demurely. The castle is patrolled by a warden who seems to operate on a 'panoptic' principle (cf. Foucault, 1977); his presence is likely to be made apparent at some point during a visit, but the visitor is generally uncertain as to his actual location within the castle complex at any given time.

The castle thus operates as what we refer to as an *operational matrix*. Its structure tacitly encodes the principles of its use in the same way as does a supermarket, a shopping mall or a housing estate.⁴ An operational matrix remains a pedagogic text. However, there is no transmission of principles, rather a regulation of behaviour. The distinction between the reader voices of transmission and regulatory texts is that the former constructs an apprenticed reader as a potential *subject* of the discourse, while the latter constructs a regulated *operative*. Crucially, transmission texts, as they have been described here, construct the kind of practice that tends to make its principles available within discourse. Regulatory texts, by contrast, construct the kind of practice for which principles are relatively implicit, which is to say, not so readily available within discourse. We shall refer to these modes of practice as high discursive saturation (DS⁺) and low discursive saturation (DS⁻) respectively. We shall now move on to look at the second castle.

MOUNTFITCHET CASTLE AND THE MYTH OF PARTICIPATION

Bodiam Castle primarily consists of the material remains of a building and is owned by a charitable organization, the National Trust. Mountfitchet, by contrast, is almost entirely a modern (1986) reconstruction and is a privately owned commercial enterprise, which is to say the institution is likely to be characterized, at least in part, by exchange relations. In the way that we have defined it, a pedagogic activity is concerned with the regulation of practice which is why the principles of evaluation of texts are located on the transmitter side. An exchange activity, on the other hand, is concerned with the marketing of a product and so locates the principles of evaluation on the acquirer side. This is not to deny that a commercial organization might seek to construct rather than respond to a market; under these circumstances, it will be operating pedagogically. Nor is it to deny that marketing strategies in the context of exchange relations must act selectively on the reservoir of potential clients. Both pedagogic and market texts construct reader voices. The latter, however, impose less regulation in terms of their reading. In Bernstein's (1977, 1996) terms we might say that pedagogic activity is strongly framed, while exchange activity is weakly framed.⁵

The 'Souvenir Edition' of the Mountfitchet Castle guidebook constructs its product via positioning strategies which establish its singularity – 'The Castle Time Forgot' – and which affiliate to authoritative documents (Domesday Book) and to institutions and individuals constituting endorsements. Thus:

MOUNTFITCHET CASTLE is a national Historic Monument Grade II and is, therefore, protected by the Department of the Environment; this means that when constructing new buildings, we are governed by strict rules and regulations. . . .

In the re-construction, we followed the advice and guidance of two historical advisers – Dr Frank Bottonley, author of *The Castle Explorer's Guide* and Vice Principal of Trinity and All Saints College, Horsforth, Leeds and Mr Harry Strongman, formerly Head of Division of Teaching Studies, Bullmarsh College of Higher Education, Reading. (Mountfitchet guidebook: 8)

The 'we' in these two paragraphs is not identified in the text. The misspelling of Bulmershe College is simply indicative of the commodification of the products of higher education by this market institution. It is also worth noting that both Trinity and All Saints and Bulmershe Colleges are primarily teacher training colleges. This does not constitute the castle as a pedagogic institution. Rather, it identifies school teachers and students as an important fraction of its market.

The Mountfitchet guidebook also makes reference to the domesticated animals that are kept on the site (19):

MOUNTFITCHET CASTLE prides itself on the freedom and happiness of its animals, many of which have come here from less happy backgrounds; some of the chickens are rescued from battery farms, the goats are either unwanted or outgrown pets and the deer are either road accident victims or orphans. We are often approached to adopt injured baby fallow deer, which we give the necessary veterinary care and then integrate them into the herd.

Here, the text is recruiting from the discourse of animal welfare. The effect is to expand its potential market, but this is at the cost of a weakening – in effect, a bifurcation – of its organizing principle. This strategy constitutes incoherence in the privileged practice of a pedagogic institution. In the context of exchange, however, the application of principles of selection are devolved to the acquirer, so that breadth is more important than coherence. There is, in fact, an attempt in the guidebook to articulate the two discourses (19):

Many of the breeds are exactly as the Normans would have kept for meat and milk; animals in Norman times were prized possessions, a great status symbol – the deer only being hunted by the Baron or Lord. The punishment for deer-poaching was the removal of a hand or, for a subsequent offence, the death penalty.

The effectiveness of this strategy is somewhat weakened by the contrast in treatment of the deer – veterinary care as opposed to hunting.

The final sentence of the above extract signals a further broadening of the organizing principles of the institution. That is to say, there is a foregrounding of an interest in physical violence and maiming here and in the associated texts. Severed heads on bloody poles adorn the palisade; a corpse hanging from a gibbet is positioned centrally in the reconstruction and punishment stocks are located nearby; in the prison, the constable is in the process of cutting off a felon's hand; and so forth. The emphasis on violence in this way appeals, perhaps, to the same kind of reader/visitor interest as the London Dungeon or Madame Tussaud's Chamber of Horrors.

For the purposes of this article, the crucial distinction to be made between the Bodiam and Mountfitchet texts is in respect of their distinct modes of mythologizing of the past. As we have suggested, the Bodiam text provides a form of commentary on the past that backgrounds the simulating work of the historical/archaeological practices. These practices are presented as uncovering rather than constructing the past. Even a realist epistemology would grant the constructive effect of the principles of recognition and realization that constitute the historical/archaeological 'past'. We refer to this effect as *recontextualization*. In the case of Bodiam, the recontextualized past

is presented in terms of the myth of reference. The Mountfitchet texts go further in claiming to provide an experience comparable to Norman England. The publicity leaflet, for example, invites visitors to:

Wander back in time over 900 years and experience what life was like in a Norman castle and village. . . . Marvel at the siege weapons including two giant catapults, take a trip to the top of the siege tower and tiptoe into the baron's bedroom while he sleeps. (Publicity leaflet)

The guidebook begins (2):

We hope you enjoy your visit here today, and the unique experience and atmosphere in 11th Century England.

The infrastructure of the castle comprises wooden outer walls within which are sited various wattle and daub buildings, siege weapons, punishment stocks and gallows, ponds and so forth. Most of the buildings contain figures engaged in appropriate activities and entry into each building triggers a tape loop. In some cases the tape is constituted as a greeting by one of the figures, thus:

'Welcome to my home . . .'

'Welcome to my kitchen . . .'

'Help me, kind sir' (figure caught in a 'man-trap')

The claim to provide authentic experience of another time/culture of necessity entails a paradox as is illustrated by the following extracts:

'We only *bath* once a month, in winter, we don't bath *at all*.' (Head of communal house, italics indicate emphasis)

'You have just walked back in time to the eleventh century.' (Baron)

' . . . one of my descendants is destined to become famous.' (Baron)

In the first case the authorial voice is rendering strange (via emphasis) a practice with which it is itself associating. In the second, the Baron (simultaneously holding court in his hall and asleep in bed) is addressing an impossible visitor. In the third extract the Baron is impossibly constructing his own family 'history'. The Mountfitchet texts clearly assert that interaction is an essential feature of an experience of the eleventh century. However, these interactions are themselves of necessity removed from the eleventh century.

Again, this is part of the work of recontextualization which renders the claim to provide experience of another time/culture mythical. We refer to this myth as the myth of participation.

The Bodiam and Mountfitchet texts both mythologize the relation between a generative practice – history/archaeology – and its simulated object – the past. We refer to the generative practices as the *esoteric domain* of, in this case, history/archaeology, and the simulated object as its *public domain*. In so far as it realizes the DS⁺ practices of historical/archaeological discourse, the strategies of the Bodiam guidebook provide some access to the esoteric domain, thus constructing an apprenticed reader. The Mountfitchet texts, by contrast, render this domain invisible. That which is constituted as DS⁺ in the Bodiam text is rendered as DS⁻ in the Mountfitchet guide. Here, the promise is to show the reader/visitor what it was really like. This claim is, of course, made with authority, as is illustrated by the affiliations introduced at the head of this section. However, what is being offered here is an experience and not an apprenticeship. The principles of evaluation of this experience reside with the visitor precisely because no other principles are made available. The Mountfitchet texts, in other words, foreground exchange rather than pedagogic activity. We shall now move on to the zoo texts.

ZOOS AND THE CONSERVATION MYTH

London Zoo is an institution of the Zoological Society of London, which, according to the official guidebook (London Zoo, 1997) was founded on 29 April 1826 by Stamford Raffles, who died in July the same year. The current strapline is ‘Conservation in Action’, which perhaps contrasts somewhat with the original purpose of the initial resolution of the society, ‘to establish a collection of wild animals’ (London Zoo, 1997).

Howletts Wild Animal Park is one of two ‘zoos’ owned by Howletts and Port Lympne Estates Ltd.⁶ According to the audio guide, it was established by John Aspinall after he made a lot of money at an early age. Aspinall is a prominent figure in the texts that we have considered; his principal residence is situated within the Howletts site. The current strapline for Howletts and Port Lympne is ‘Committed to Conservation’.

There are a number of differences between these two zoos as they are represented in the texts that we have considered. First, the institutions differ in the extent to which they participate in exchange activity. However, and more importantly for the present discussion, there are also differences in the constructions of their respective esoteric domains, notably in respect to their different relationships to the DS⁺ practices of scientific research. London Zoo affiliates to science through its foregrounding of references to the Zoological Society of London, a brief history of which appears at the front of the official

guide. We obtained, from an information kiosk, a folder containing information on membership of the society. A letter from its Director General, included in the folder, notes that 'we undertake ground-breaking biological research in those areas directly related to conservation.' These are positioning strategies, affiliating the Zoo to the research activity. To a limited extent the official guide also gives limited access to the esoteric domain principles of this research activity. Thus there is a definition of the term 'species' – 'a group of animals that are so similar that they can breed together and produce fertile offspring' followed by a brief entry on 'The Binomial System' of nomenclature. This text is very weakly DS⁺.

The Howletts guidebook incorporates positioning strategies which externalize scientific practice, thus:

Some of our achievements, such as our gorilla colony – the largest and most prolific anywhere – are widely known, while others, which involve less familiar species, are regarded with admiration by professional zoologists. (Howletts guidebook: 2)

Some years ago an American zoologist made a study of the breeding of small wild cat species in a number of zoos, including Port Lympne and a number of more conventional ones (some of which deliberately keep contact between the cats and their keepers to a minimum). The researcher's findings triumphantly vindicated Port Lympne's methods – 'the more time keepers spend interacting with the cats they care for, the more likely the cats are to successfully reproduce.' (Howletts guidebook: 9)

As with many other primate groups, zoologists have problems deciding whether different forms of saki monkey should be regarded as races or full species; but according to the latest classification there are five distinct species, ranging over the forest regions of northern South America. (Howletts guidebook: 15)

These extracts objectify zoological practice which is projected outside the Howletts esoteric domain. Zoology is apparently constituted as a public domain message in this text. This distribution is made apparent in the audio guide in an interview with Nick Marx, the keeper in charge of carnivores at Howletts:

Interviewer The white spots on the ears . . . is there a particular function to that . . . ?

Nick Marx Well, the scientists say so, I think, probably, most of the tigers haven't read the books. The theory is that they could possibly be a sign for cubs to follow and it could also be a sign that when their ears are right up in an

aggressive situation, you can see the white spots on the ears, because the ears are flat back against the skull. Frankly, I think there's too much science talk, I'm sure it's, if the tiger's got its ears back, you know he's fed up and you don't need to see a white spot on its ears. So I don't think you want to listen too much to these theories, they're just beautifully marked animals. (Audio guide)

A central element of the Howletts esoteric domain as realized in these texts is a localized experience in contrast to the generalized discourse that is constituted by science:

Millions of television viewers have enjoyed the sight of John Aspinall, members of his family, and staff at the two zoos going in with such animals as adult gorillas or pairs of tigers with young cubs. . . . In the case of tigers, in particular, this practice is made possible by a process known as 'bonding' – that is, the establishment of an affectionate, personal relationship between a tiger and a keeper. Bonding begins with the keeper having contact sessions with young tigers; these sessions include playing, but also a strong element of training in what is acceptable behaviour towards humans. The cubs are discouraged from biting and clawing. The aim is to form a bond, built on mutual trust, friendship and respect, which is reinforced each time contact is made between tiger and keeper. (Howletts guidebook: 6–7)

In the audio tape interview, Nick Marx describes the benefits of this relationship with tigers as follows:

The benefits of . . . emotional input is, obviously, the animals are happier, they're easier to look after, they're easier to treat if they've had health problems, they're miles happier and, of course, I'm happier too. You can stimulate them, you can see how active these are, how happy these are, they really enjoy my company and they do look better than if they're aggressive and if they're unhappy in their environment. (Audio guide)

Aspinall himself also associates 'bonding' with the conservation project:

some species, like the great cats, the only ones that have ever been returned to the wild have been bonded [three names] are the pioneers in this classic adventure all have bonded with their animals first and . . . you can't just release tigers from captivity into the wild and hope for the best, they have to teach them to hunt like their parents would, assist them in every way, give them back-up that's psychological as well as physical. Then you can manage it and it has been done. It could only be done with bonded animals. With our gorillas it hurts us a lot, but,

ideally if they're not frightened of their keeper-handlers and will come up and when they're called they'll . . . bonding is the deepest part of our whole approach. We believe that this is a man-made divide . . . them and us . . . the other species and at Howletts and Port Lympne nearly all the keepers and my family believe it's us and us and we don't look down on anything here. (Audio guide)

The reader is thus introduced to a discursive rationale for 'bonding'. However, the texts also construct a region of esoteric domain practice which is predicated on the localized experience which is available only to the Aspinalls and zoo keepers via their close interactions with the animals. Discursive texts cannot apprentice the reader into this essentially DS⁻ practice. The texts also affiliate their authorial voice to dangerous and/or vulnerable animals. By contrast, the reader is positioned as external observer of both the animals and the authorial objectification of them and is consequently dependent upon the exclusive expertise of the author which is claimed but not elaborated. Expertise is thus exchanged for authority. To a substantial extent, this authority is vested in the charismatic voice of John Aspinall whose speech and image – in close encounter with tigers, gorillas and elephants – occur throughout the texts.

While there are these substantive differences between the texts associated with the two zoos, there are also important similarities in respect of the central concern of both sets of texts with 'conservation'. The London Zoo official guide has a section under the heading 'Conservation in action' on most pages and a ten-page chapter under the same heading. The Howletts guidebook has two sections, one of four pages titled, 'The role of Howletts and Port Lympne in conservation' and a ten-page section titled 'Overseas conservation'. There is also reference to the issue of conservation throughout the Howletts guidebook. The key questions are, 'what is being conserved?' and 'how?'

Both sets of texts identify the zoos' role as being concerned with the conservation of 'endangered species'. As was the case with Bodiam, this is in part achieved via the constitution of the physical institution itself as a DS⁺ pedagogic space – an operational matrix. Each zoo is organized as a taxonomic structure in which physical barriers and a division of labour within the body of keepers construct strong classification of the various species contents. The visitor, by and large, moves physically between species.

The conservation of endangered species is also achieved discursively in the guidebooks and other written and spoken materials. Thus, there is explicit incorporation of the collection of animals into the taxonomy of species via the generalizing (DS⁺) strategy of the provision of a definition of 'species' in the London Zoo official guidebook, as indicated above. Both sets of texts also incorporate specializing (DS⁺) strategies which elaborate principles of

recognition relating to individual species and genres. For example, the Howletts guidebook entry on elephants begins as follows:

The **African elephant** (*Loxodonta africana*), the species kept at Howletts, is the largest and most powerful of all living land mammals. It is larger than the Asian species, with relatively bigger ears and tusks, and has two finger-like extensions at the end of the trunk, whereas the Asian has only one. (Howletts guidebook: 27)

Positioning strategies are employed in both sets of texts to oppose the heroes of conservation to its enemies. Thus,

Extinction is a natural process. For millions of years, new species have evolved and others have become extinct. But the concern today is that extinction is happening at a much faster rate than evolution – and the main cause is the activity of humans. (London Zoo, 1997: 40)

The guide identifies particular categories of human including hunters, deforesters, polluters, tourists and souvenir hunters and so forth. A Howletts pamphlet notes that:

In 1987 John Aspinall, acting for the Howletts and Port Lympne Foundation, signed an agreement with the Congolese government to set up an orphanage in Brazzaville zoo grounds to rescue infant gorillas from poachers and provide a rehabilitation centre with the aim of returning groups of young gorillas to the wild state.

From the tame countryside of Kent, Mark Attwater, a former Howletts Animal Park keeper and his wife Helen, a qualified nurse, set out for the Congo two years later to run this pioneering project. (Howletts pamphlet)

Aspinall and his staff are identified as heroes of conservation, the Congolese government as their clients and unnamed Congolese citizens as poachers and enemies of conservation. The north/south global hierarchy constructed by these positioning strategies is sustained in the differential modes of identification of the white heroes, John Aspinall and Mark and Helen Attwater, on the one hand, and the black heroes, the 'foster mothers' (who act as surrogate mothers to infant gorillas) Rosaline and Simone, each of whom is referred to only by a first name and are thus infantilized relative to their white superiors and identified with the gorillas which also have only first names.

This global hierarchy is consistent with the identification of most endangered species with 'Third World' regions including Indonesia, Africa and South America. The treatment of the British field cricket by the London Zoo official guide is somewhat different from the gorilla text. Thus, the loss of the cricket's habitat is passively identified as the result of 'changes in grazing practices'. Further, Britain is presented as able to organize its own conservation

activities via the institutions English Nature and London Zoo. This contrasts with the Congo government, presented as Aspinall's client, above, and, for example, a photograph of the white Dr Jacques Flamand surrounded by Nepalese children in the London Zoo official guide and another photograph of a white man surrounded by Indonesian men captioned 'London Zoo staff taught tiger husbandry to Indonesian staff' (London Zoo, 1997: 45).

One of the sheets from Howletts educational materials consists of two statements relating to the world embargo on trade in elephant products, one by David Shepherd – 'an artist and founder of the David Shepherd Foundation, an elephant charity' – and one by Andrew Mutandwa – 'information counsellor at the High Commission of the Republic of Zimbabwe'. Mutandwa's statement inverts the global hierarchy established elsewhere in the texts, thus:

Is it a coincidence that the most outspoken people who claim to know the most about wildlife are those who live in concrete jungles in the west? It is a continually painful experience when the conservation successes of countries like Zimbabwe are dismissed as a fluke. Simple logic should dictate that those who have proved most able to conserve endangered species are best placed to speak out for their welfare. (Howletts Wild Animal Park Secondary Education Pack)

Mutandwa's strategy, here, is to claim the superiority of localized (DS-) experience over the generalized (DS+), but detached, discourse of the 'arm-chair environmentalists'. Furthermore, he positions both endangered species and human beings within the same competitive and hierarchical society/eco-system, thus:

The elephant in Zimbabwe lives with the people. In a world of rising populations and diminishing forests, the elephant has to compete with man for space. But that would be an unequal battle, so the Zimbabwe government has striven to even the odds and ensure that the elephant will still have a place in the wild – co-existing with the people. This will be possible only because our people understand and have accepted that even though an elephant is a big nuisance with a well-managed herd, local communities can benefit directly from the sale of animal products.

Even the urban dweller realizes that if wildlife is self-sustaining, revenue from taxes will be available for social needs and not diverted to wildlife conservation. (*ibid.*)

However, this reorganization of voices by Mutandwa is contextualized by the semiotics of the page on which it appears. A schematic of this page is given in Figure 1. The page is divided into two columns each containing a statement and a photograph of the author. Above the columns is the title of the piece, 'FACE TO FACE', arranged so that the first 'FACE' is higher than

FACE^{to}FACE

World governments recently agreed to continue the ban on ivory under Cites, despite pressure from southern African countries for the right to trade in elephant products. Face to Face looks at the issues behind the decision.

photo of David Shepherd

David Shepherd

‘There is doubt about the validity of the elephant counts used to justify the need to cull.’

David Shepherd is an author and founder of the David Shepherd Foundation, an elephant charity.

photo of Andrew Mutandwa

Andrew Mutandwa

‘A world that has plundered its own wildlife resources should not put our experts on trial.’

Andrew Mutandwa is information counsellor at the High Commission of the Republic of Zimbabwe.

Figure 1

the second. Below the first 'FACE' is a statement about the world governments' agreement and below this is Shepherd's photo and statement. This structure thus identifies Shepherd with a global governmental agreement against which stands Mutandwa and Zimbabwe.

The pack also contains a page presenting 'Arguments for and Against the Ban on Trade in Ivory'. The arguments (reprinted from a BBC publication) appear in two columns, with the 'for' text being more extensive than the 'against' text (by a factor of about 1.3). Beneath the columns more text includes a refutation of one of the 'against' points and the statement: 'Although some elephant populations are rising, the species is still highly threatened over most of its range.'

Mutandwa's text is thus recruited as a resource by a higher level strategy which constitutes it as a token local oppositional message to that distributed to the dominant authorial voice of the educational text. Shepherd's statement contrasts Zimbabwe with Zambia. The latter state is adjudged to be in the process of rehabilitation, thus:

We, with Elefriends, have recently shown our commitment to achieving a balance between wildlife protection and human welfare by undertaking to support Zambia in an ambitious programme of protection and monitoring. This is in conjunction with a high-level political commitment to eradicate Zambia's ivory trading and stockpiles. (Howletts Wild Animal Park Secondary Education Pack)

The statement ends:

We consider that there are certain issues that transcend national sovereignty – rainforests, acid rain, hunting in the oceans, and the future of elephant and rhino, are leading examples of these – and the world as a whole should be held accountable. (*ibid.*)

There is, in fact, a convergence between this final comment and the edited extract from Mutandwa's statement which is repeated, in bold, at the foot of his statement:

A World that has plundered its own wildlife resources should not put our experts on trial. (*ibid.*)

The full sentence in Mutandwa's statement reads:

A World that has plundered its own wildlife resources – *for indeed, once upon a time, almost every country of the world was once teeming with wildlife* – cannot and should not put our *own nature* experts on trial. (*ibid.*; emphasis added)

The excision removes an emphasis. However, the removal of the adjective 'nature' allows 'experts' more readily to be associated with government in

general; immediately below the edited extract is the description of Mutandwa as information counsellor at the High Commission of the Republic of Zimbabwe. At the opposite, top left-hand corner of the page is the introductory paragraph implicitly contrasting 'World governments' with the Zimbabwe government, a contrast which is made explicit in Shepherd's statement. It is not the 'world which has plundered its own wildlife resources' which is putting Zimbabwe on trial, but the rehabilitated world with white conservationists in the van.

The emboldened extract from Shepherd's statement reads:

There is doubt about the validity of the elephant counts used to justify the need to cull. (*ibid.*)

The original:

there is *serious* doubt *amongst informed conservationists* about the validity of the elephant counts which are used to justify the 'need to cull'. (*ibid.*; emphasis added)

Again, the removal of 'serious' and the quotation marks around 'need to cull' reduces emphasis. The removal of 'amongst informed conservationists', however, implicitly elevates the opinion of a particular group to the status of fact.

Shepherd's statement describes the basis of the 'doubt' as follows:

The censuses in Zimbabwe and neighbouring countries took place at different times, and didn't allow for the possible migration of herds across national boundaries and thus being counted at least twice. (*ibid.*)

While such an inadequacy in the census process would certainly challenge the validity of the count, on the face of it, it suggests that an undercount is just as likely as an overcount. The resulting logical flaw in what is, arguably, Shepherd's only substantive argument against elephant culling, is not referred to elsewhere in the Howletts texts.

The discursive and non-discursive zoo texts that we have discussed constitute a regulation (and to a far lesser extent an apprenticing) of the zoo visitor into a taxonomy of species, a pathology of anti-conservation practices which are globally distributed on a broadly north/south hierarchy, and a programme of pro-conservation practices. In respect of the latter, we have already discussed the reintroduction into the wild of practices foregrounded in many of the Howletts texts. However, both the Howletts and London Zoo texts also refer to 'captive breeding' and the use of international studbooks. 'Martin's story', in the London Zoo official guide, provides a clear indication of precisely what is conserved in these conservation practices:

We were able to incorporate Martin in the European breeding programme because the studbook showed that he was pure bred Sumatran. A Sumatran tiger with Siberian or Bengali ancestors would have been a hybrid and therefore unsuitable for breeding.

The next stage was to select a perfect mate. We searched the studbook for a female of the right breeding age who was as distinctly related to Martin as possible. The computer is able to give each tiger a 'mean kinship number' which indicates each individual's degree of relatedness to every other tiger on the programme. From all the information available, the species co-ordinator selected Mira, a 7-year-old from Bremerhaven Zoo in Germany. (London Zoo, 1997: 44–5)⁷

What is being conserved, then, is not simply animal life, but the purity of the categories of the taxonomy which is itself the simulation of DS⁺ zoological practices and which is reified via reference to 'endangered species' and to the extra-zoological 'causes' of such endangerment. In this respect, the conservationist strategies of the zoos are directed towards the reproduction and globalization and empiricalization of their own simulations.

MYTH, PEDAGOGY AND EXCHANGE

In discussing these texts we have introduced elements of a language of description. This language defines the categories, esoteric and public domain, apprenticing strategies, authorial and reader voices, pedagogic and exchange relations and so forth. Our deployment of the language of description has, first, enabled us to describe the four sets of texts in the same terms. This, of course, is the essential purpose of theory. Second, the specific nature of the language has generated textual analyses that are sociological in nature. That is, we have described the texts in terms of the ways in which they construct relations and distribute practices between social positions, such as transmitters and acquirers in pedagogic activity.

We are now in a position to summarize key elements of our analysis and to suggest the nature of some implications for edutainment and educational institutions more generally. Before doing so, however, we should restate two qualifications. First, the form of analysis that we have been conducting is text analysis. That is, we are analysing the text as an instance of a referent social activity (see Dowling, 1998, 1999a). What we are not doing is audience research (e.g. see Buckingham, 1993). We are aware that some authors within the field of audience research have criticized text analysis approaches on the basis that they tend to assume that the text defines its own use. However, we are not making that assumption. We are defining referent activities as exhibiting particular characteristics. To the extent that an audience, reader or visitor

occupies voices that are constructed by the texts, then they are participating in the same referent activity. That they may be participating in different activities is attested by graffiti on the wall of the postern tower of Bodiam Castle. We would add that audience research must also recontextualize and so mythologize its object. It often does so, furthermore, with very little attempt to render explicit its recontextualizing principles. To this extent, such research may be described as DS⁻ practices parading as DS⁺.

Second, our aim in the analysis is not to provide definitive descriptions of the institutions that we have discussed. Rather, we have attempted to describe the institutions in terms of their referent activities in so far as these are instantiated in the texts that we have looked at. The implications of our analysis are to be interpreted in relation to the extent to which authors of edutainment or educational material are intending to participate in the kinds of referent activity that we have described.

In relation to these implications, then, we should recall that the texts of three of the institutions that we have introduced construct strongly pedagogic relations between their authorial and reader voices. That is, in each case, authority in respect of the principles of evaluation of texts and practices – the esoteric domain of the practice – is distributed to the authorial voice of the texts. The reader or visitor may be constructed as an apprentice in relation to the esoteric domain. In this case there will be some attempt to render this domain visible. Such visibility is found in the Bodiam and to a lesser extent in the London Zoo guides. The Howletts guide provides an apprenticeship into a rationale for ‘bonding’. However, this rationale is a discursive recontextualization of the practice itself which is, of necessity, non-discursive (DS⁻). The material layouts of these three institutions are operational matrices that constitute regulatory texts in respect of a privileged comportment in relation to heritage (Bodiam) or the simulation of nature (London Zoo and Howletts Wild Animal Park).

In terms of institutional missions, the school (including further and higher education) would seem to stand as the institution most explicitly associated with pedagogic activity, at least with respect to discursive forms of practice. It is, therefore, to schools that institutions such as the National Trust and the London Zoological Society might reasonably look for lessons in the production of pedagogic texts. Naturally, learning these lessons will depend upon the availability of a language of description that is adequate to the analysis of school texts. This is the case not least because the school operates to exclude as well as to include. Dowling’s (1998, 1999a) analysis of school mathematics texts, for example, organizes and illustrates the ways in which specializing and generalizing strategies operate to construct access to the generative principles of a DS⁺ practice, such as mathematics, while localizing and articulating strategies deny such access in the case of these kinds of practice. In developing the Bodiam and London Zoo guides as apprenticing texts,

therefore, their authors would need to give attention, first, to how most effectively to give access to specialized topics within the esoteric domain of historical/archaeological or zoological/conservational discourse. Second, they would have to attempt to reveal how these specialized topics relate to each other within the more generalized discourse. The development of such textual strategies would entail careful consideration of the ways in which the texts moved between the mythologized public domains of historical/archaeological or zoological/conservational discourse and the esoteric domain principles that generate these public domains.

The castle and zoo texts also incorporate regulatory strategies, first, in respect of the physical (DS⁻) realization as operational matrices of heritage comportment or zoological classification. In so far as the school is concerned primarily with the transmission of DS⁺ practices, it may be that it pays insufficient attention to the ways in which other institutional intentions – such as privileged comportments and administrative practices – are encoded within its non-discursive organization. If this is the case, then it may be that institutions, such as castles and zoos, have something to teach the school. We are not in a position to develop this programmatic further here.

Second, the texts incorporate regulatory strategies that operate in the other direction, as it were. This is clear in the discursive recontextualization of the DS⁻ practice of ‘bonding’ in the Howletts texts. However, it may also be appropriate to describe as ‘regulation’ rather than apprenticeship the construction of ‘conservation’ as a discursive practice. Specifically, the discursive strategies of these texts present the conservation position as the product of rational decisions within a broader general discourse. This is illustrated, for example, in the ‘face to face’ debate in the Howletts text. Clearly, rhetorical strategies feature strongly here. However, this is not quite the point. This excerpt from the London Zoo guide is instructive:

Extinction is a natural process. For millions of years, new species have evolved and others have become extinct. But the concern today is that extinction is happening at a much faster rate than evolution – and the main cause is the activity of humans. We have used up the earth’s natural resources unsustainably, without planning for the future, and now we’re waking up to the fact that, for thousands of animals and plants, it may be too late. (London Zoo, 1997: 40)

This text constructs an opposition between what we might refer to as a ‘natural’ activity, on the one hand, and ‘human’ activity, on the other. On the face of it, the rationale for conservation is associated with good husbandry practices and the need to sustain animal and plant resources. This does not, however, justify, for example, the eugenic practices illustrated in tiger conservation in the London Zoo guide which are concerned with the preservation

of the minute categories of zoological classification. Nor does it justify the condemnation of specific forms of exploitation of animals as ‘inappropriate’ – elephants for their tusks, tigers for Chinese medicine, mink farming for fur and so forth. The discursive privileging of conservation within the context of a pedagogy of zoological classification introduces a tension in the text. This tension has been revealed by the discursive engagement that the discursive form of the text invites. Zoology as well as hunting and farming are practices that objectify and so exploit animals. The decision to privilege one or more of these over the others is not one of rational choice, but rather a political decision; the occupation of what Max Weber referred to as a ‘value sphere’. This being the case, it may well be that institutions that simulate conservation practice might learn from market institutions.

Only in the case of Mountfitchet Castle have the texts that we have considered foregrounded exchange relations between authorial and reader voices. What Mountfitchet is offering is participation in an experience. The experience is certainly mythologizing – a reification of a simulation. Nevertheless, by drawing back on pedagogic authority, these texts are offering a commodity to be evaluated or enjoyed in terms to be dictated by the client. Now the other institutions also engage in exchange activity, as we have indicated. For example, on one visit to London Zoo we observed a show in which a lemur was made to perform balancing tricks for a large audience; feeding time at the penguin pool has long been an attraction. Furthermore, as we have suggested in the title to this article, all four institutions are constituted as edutainment – they are all, in part, there for a grand day out. The issues to consider, however, are, first, which features of the practices of an institution are most effectively constituted within pedagogic texts and which within market text. We have suggested that the *choice* of value spheres or political positions (rather than their elaboration) is possibly more appropriately constructed within exchange relations. To the extent that this is the case, the second issue to consider is the extent to which the rationalizing or pedagogizing of such a choice invites a form of engagement that will call pedagogic authority into question.

Having reintroduced the exchange features of these edutainment institutions, it is appropriate to conclude the article by reflecting briefly on the extent to which, as market institutions, they have anything to teach the school. As we have indicated, Dowling’s analysis of school textbooks has associated the myth of participation with academic failure. Essentially, this is because this myth operates more or less exclusively within the public domain so that access to the esoteric domain principles of the practice is denied. Furthermore, in so far as esoteric domain principles are still privileged, the public domain is always a more or less radical recontextualization of other practices. The myth of participation has, here, been associated with the Mountfitchet texts. In the latter case, however, the texts foreground exchange

relations between authorial and reader voices. Furthermore, the particular form of the public domain, though still mythical, is constituted as a form of myth that is marketable; the kids can have fun at the castle. School discourses must construct public domains in order to provide points of entry. It may be that the most important lesson that is to be learned from the analysis that we have presented here is that public domains should primarily be constructed outside of pedagogic activity as market texts. If they are market texts, then they should be marketable in their own rights and not as the sugaring of a pedagogic pill. If school exchange activity entails the production of commodities that are the simulations of its privileged discourses, then school pedagogic activity can concentrate on the transmission of the principles that enable these simulations.

NOTES

- 1 See Dowling (1998 and 1999b) for a discussion of our particular interpretation of the method of ideal types.
- 2 We must include reviewers, editors and other commentators as well as publishers (in respect of house style etc.) who all, empirically, contribute to the authorship of a paper.
- 3 In using the terms 'transmitter' and 'acquirer' we are not privileging a specific form or theory of teaching and learning. A constructivist psychology of learning is entirely consistent with our sociology, provided that it is not asocial constructivism or, shall we say, cognitivist. The terms 'transmitter' and 'acquirer' derive from Bernstein (1996).
- 4 This is not to say that operational matrices operate in a determinate way on users' behaviour. Empirically, this is clearly not the case as is illustrated by John Fiske's (1989) study of a shopping mall. An operational matrix differs from discursive pedagogic texts in that its principles are encoded, in the main, non-discursively. Examples of regulatory texts that are not operational matrices are algorithms and recipes.
- 5 We are using Bernstein's term by analogy, here, in order to aid the reader who is familiar with Bernstein's work and not ours. Our position in detail differs from that of Bernstein to the extent that we do not consider classification and framing to be mutually independent. That is, we claim that strong classification entails strong framing generating redundancy. To the extent that an empirical situation is described as exhibiting strong classification and weak framing, we would claim that there may be some confusion regarding precisely what is classified/framed, which is to say, a conflation of different levels of analysis (see Dowling, 1999a and especially 1999b).
- 6 In the audio guide, Aspinall explains that he prefers to call Howletts a 'wild animal park' because of the negative connotations of the term 'zoo'.
- 7 See Dowling (1999a) for a discussion of the semiotics of this page of the London Zoo official guide.

REFERENCES

- Barber, M. (1996) *The Learning Game: Arguments for an Educational Revolution*. London: Gollancz.
- Barthes, R. (1972) *Mythologies*. London: Granada.
- Barthes, R. (1974) *S/Z*. London: Jonathan Cape.
- Barthes, R. (1981) 'Theory of the text'. In Young, R. (ed.) *Untying the Text: A Post-structuralist Reader*. London: Routledge & Kegan Paul; 31–47.
- Bastiani, J. and Wolfendale, S. (eds) (1996) *Home-School Work in Britain: Review, Reflection and Development*. London: David Fulton.
- Baudrillard, J. (1993) *Symbolic Exchange and Death*. London: Sage.
- Bernstein, B. (1977) *Class, Codes and Control: Towards a Theory of Educational Transmissions*, 2nd edn, Vol. 3. London: Routledge & Kegan Paul.
- Bernstein, B. (1996) *Pedagogy, Symbolic Control and Identity: Theory, Research, Critique*. London: Taylor & Francis.
- Brown, A. J. and Dowling, P. C. (1998) *Doing Research/Reading Research: A Mode of Interrogation for Education*. London: Falmer Press.
- Buckingham, D. D. (1993) 'Introduction'. In Buckingham, D. D. (ed.) *Reading Audiences: Young People and the Media*. Manchester: Manchester University Press; 1–23.
- Dowling, P. C. (1996) 'Baudrillard 1 – Piaget 0: Cybernetics, Subjectivity and the Ascension'. Presented at the University of Cape Town, April 1996. Available at www.ioe.ac.uk/ccs/dowling/1996.html
- Dowling, P. C. (1998) *The Sociology of Mathematics Education: Mathematical Myths/Pedagogic Texts*. London: Falmer.
- Dowling, P. C. (1999a) 'Interrogating Education: Texts, Social Activity and Constructive Description'. Plenary presentation at Centro de Investigaç o em Educaç o da Faculdade de Ciências da Universidade de Lisboa, April 1999. Available at www.ioe.ac.uk/ccs/dowling/lisbon1999
- Dowling, P. C. (1999b) 'Basil Bernstein in Frame: "Oh dear, is this a structuralist analysis?"'. Presented at Kings College, University of London, December 1999. Available at www.ioe.ac.uk/ccs/dowling/kings1999
- Dowling, P. C. (forthcoming) 'Mathematics education in late modernity: beyond myths and fragmentation'. In Atweh, B., Forgasz, H. and Nebres, B. (eds) *Socio-cultural Aspects in Mathematics Education: An International Research Perspective*. Sydney: Erlbaum.
- Eco, U. (1976) *A Theory of Semiotics*. Bloomington: Indiana University Press.
- Eco, U. (1979) 'Introduction: the role of the reader', *The Role of the Reader*. London: Hutchinson.
- Fiske, J. (1989) *Reading the Popular*. London: Routledge.
- Foucault, M. (1970) *The Order of Things: An Archaeology of the Human Sciences*. London: Tavistock.
- Foucault, M. (1977) *Discipline and Punish: The Birth of the Prison*. London: Penguin.
- Foucault, M. (1978) *The History of Sexuality: Vol. 1, An Introduction*. Harmondsworth: Penguin.
- Home Office (1998) *Supporting Families: A Consultation Document*. London: The Stationery Office.

- Hooper-Greenhill, E. (ed.) (1994) *The Educational Role of the Museum*. London: Routledge.
- London Zoo (1997) *Your Guide to London Zoo*. London: London Zoo.
- Myers, G. (1992) 'Textbooks and the sociology of scientific knowledge'. *English for Scientific Purposes* 11(1): 3–17.
- National Trust (1991) *Bodmin Castle*. London: National Trust.
- Roberts, J. (1995) 'Melancholy meanings: architecture, postmodernity and philosophy'. In Wheale, N. (ed.) *The Postmodern Arts*. London: Routledge; 130–49.
- Sefton-Green, J. (ed.) (1998) *Digital Diversions: Youth Culture in the Age of Multi-media*. London: UCL Press.