

The Content of the Conversations of Primary School Parties whilst looking at Animal Exhibits in a Zoo

Sue Dale Tunnicliffe¹

Abstract

Visitor studies of the 'time and motion' kind led to the widespread development of concepts such as attracting power, holding power and exit gradient. Recent studies in exhibitions have, whilst still paying attention to the spatial and temporal issues, begun to consider the cognitive content of the 'dialogue' between the visitor and the exhibit designer. Such studies have focused on the leisure visitor and not on the out of school visits organized as part of the curriculum entitlement for pupils. The paper will consider a methodological approach to collecting qualitative material and transforming it into quantifiable data. The examples will be drawn from the studies of groups of children and their accompanying adults during school organized visits to a variety of types of animal exhibits in the zoo and will consider the effect of the presence of an adult on the content of the conversations of the groups.

Keywords

Primary School, Parties, Conversations, Animal, Exhibits, Zoo

1 Introduction

Primary school groups form the largest sector of the school visit to London Zoo (ZOOLOGICAL SOCIETY 1991, 24). School groups that are ostensibly taken to the zoo to learn about a specific relevant topic from the curriculum (MARSHDOYLE et al. 1981, TUNNICLIFFE 1994) particularly remember parts of the visit in which they are actively involved, relate to the curriculum, or have visited the same location several times (WOLINS et al. 1992).

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Zoos, like museums, are places of conversation (LUCAS et al. 1986) and the topics discussed are:

- exhibit access comments whilst the group seek something about which they can talk
- the exhibit and direct observations on the animals
- names of the type of animal
- interpretations of the observations in a personal context of affective attitudes, episodic memories, emotion, attitudes, aesthetics and values
- management of the group
- social comments.

The content of conversations at exhibit has four distinct categories: Exhibit access, Exhibit focused, Management of the group, and Social conversations (TUNNICLIFFE 1995).

The content of the conversations of primary school children and their accompanying adults was unknown although the general content of conversations of family groups has been discussed (ROSENFELD & TURKEL 1981, TAYLOR 1986, HENSEL 1987). Popular myth in the zoo world suggested that the content was largely “Ohs”, “Ughs”, or “Ahs” and comments about the excretory and reproductive organs with anthropomorphic interpretation for any animal remotely resembling humankind.

DIAMOND (1986) had shown that adults dominate the conversations of families at interactive exhibits in museums. However, during field trips children are allowed to look at exhibits in peer groups without an accompanying adult.

The research question for this work was to find through an analysis of spontaneous conversation of children and the adults accompanying them on a visit to the zoo and to see if there were a difference in content of the conversations of children when they looked at animals without an adult in their group.

2 Method

Sample: The children were aged from 3 to 12 years. The number of groups was 38 and the group size varied from 2 to about 6 children. The adults were either teachers, helpers or parents.

Permission was sought from the London Zoo where I decided to collect the data. The teacher in charge of each school party was approached and permission requested from them to record onto tape the conversations of groups of the children and their accompanying adult.

A typical conversational exchange at an aquarium exhibit between an adult and a child is as follows Sea Anemones

Adult: What about the red things on the rocks?

Boy: What are they?

Adult: Sea Anemones, can you see the mouth? There in the middle of the tentacles.

Boy: What do they eat then, fish?

Adult: No, they eat small bits in the water. Have you heard of jelly fish?

Boy: Yes, so when the sea anemone turns over its a jelly fish?

I needed a means whereby such qualitative data could be changed into quantifiable data. I visited a number of different locations where children looked at animals. These sites included schools receiving an outreach visit with live animals in school, a farm, a city farm, and a zoo, and listened and recorded conversations at a variety of live animal exhibits. Through listening to these conversations and reading the subsequent transcripts, broad categories of topics of conversations became apparent. These were behavior comments, comments related to the name of the animal and its taxonomy, comments about the parts of the animal's body as well as comments about where the speaker had obtained the knowledge or questions about other aspects of the exhibition and attitudes. Each conversation at a particular animal exhibit was counted as one conversational unit. Once these broad categories had been established I devised a systemic network.

A systemic network is a means of grouping or categorizing things, in this case conversations, to be a parsimonious representation of the data, whilst preserving the relationships between categories in such a way that comparisons can be made between groups. Systemic networks have first been developed by BLISS, MONK & OGBORN (1983). The one presented here has been adapted for categorizing conversations (Fig. 1).

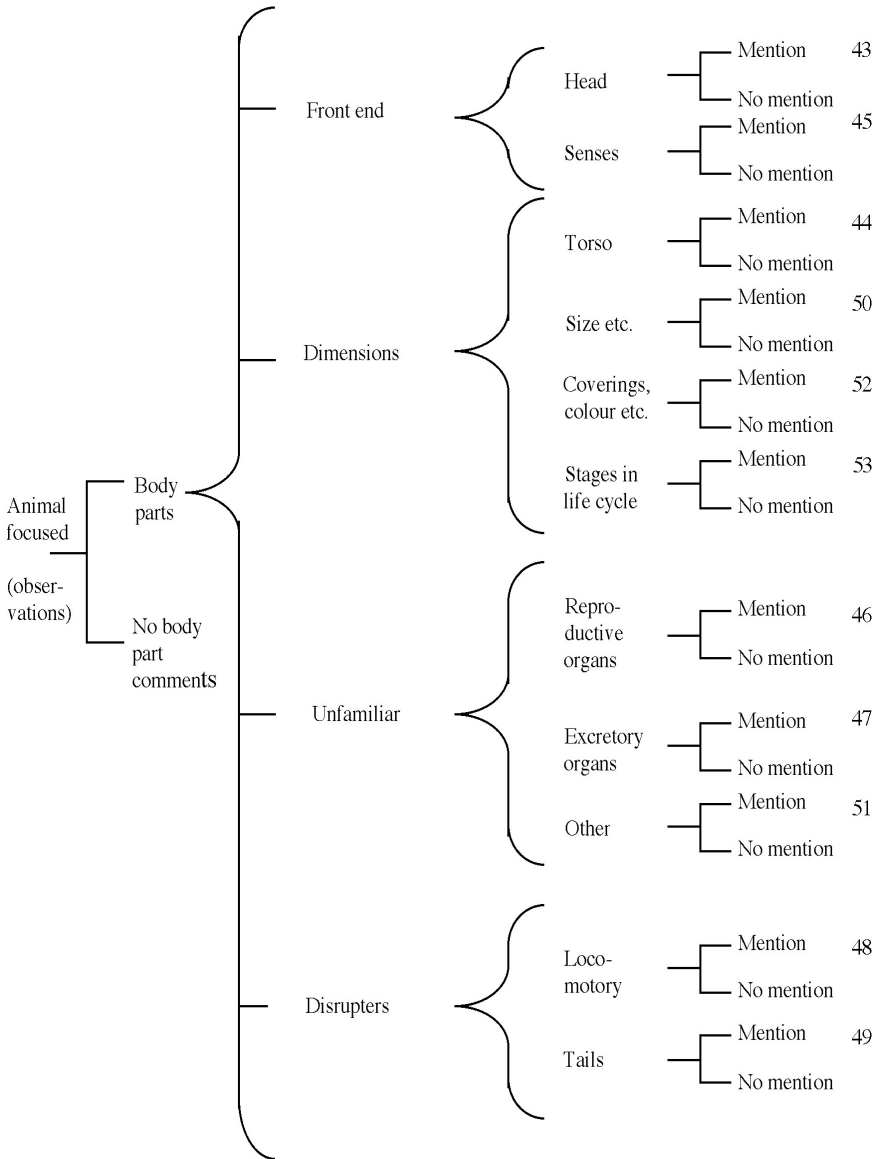


Figure 1: Part of a systemic network. This is an example of part of the systemic network used in the analysis of the transcripts of the conversations. Each feature e.g. tails, has a number, which is marked above the word or phrase on the copy of the transcript. These subordinate categories are then grouped into super ordinate categories e.g. disrupters, which in turn are grouped in a category Body parts, which is a subordinate category of animal focused comments.

The network can be regarded as the sets of boxes into which the researcher puts each part of the conversation. At one extreme of the continuum of categorizing the conversations are highly specific items, whilst at the other end is the main descriptor, in this case “children’s comments.” The numbers at the right of the figure label the most specific level of table categorization. There were 74 categories in this network. A square bracket (‘[’), indicates that an attribute may be either/or not a member of both categories, whilst a bracket (‘{’) indicates one of a number of categories which an animal may have.

Each topic of conversation was then coded according to the systemic network, which had been worked out from pilot studies (TUNNICLIFFE 1995). Each conversation unit was categorized with the appropriate number from the networks. Hence the above conversation was represented in the following way:

This is a part of a conversation of an adult and a seven-year-old boy looking at Sea anemones. ‘Red thing’ is coded as a 52. The category for colour (see Figure 1) whereas the name Sea Anemone is coded as ‘56’, common name in another section of the network). The mouth is coded as ‘43’, as this is at the head end in most animals observed so thing at that end of an animal were coded in this category. Tentacles is coded as ‘51’ as an unfamiliar part. Not all phrases and words have been coded in this example, which has focused for clarity on aspects referred to in the network example.

52

Adult: What about the red things on the rocks?

Boy: What are they?

56

43

Adult: Sea Anemones, can you see the mouth? There in the middle of the
51
tentacles.

Following the visit, the data were transcribed, coded and entered into a worksheet of Minitab (MINITAB 1991). Minitab is spreadsheet. Each terminus of the network had a column in the spreadsheet and if a comment in that category were made a ‘1’ was entered in the column for the line of the conversation being analysed. If there were no comment and ‘0’ was entered. Eventually the columns were totaled and then the numbers used in the Chi Squared analysis.

3 Results

An analysis of the overall results has been reported elsewhere (TUNNICLIFFE 1995) and is shown in Table 1.

Table 1: Main Categories of Topics of Conversations amongst Primary School Groups at London Zoo

Category	Total conversations n=459		Conversations amongst groups with adults and children n=224		Conversation amongst groups with children only n=235.	
	Number	Percentage	Number	Percentage	Number	Percentage
Exhibit access	289	63	146	65	143	61
Other exhibit comments	227	50	117	52	110	47
Management/ social	354	77	183	82	171	73
Animal focused	459	100	224	100	235	100
Body parts	280	61	150	67	130	55
Behaviors	301	66	160	71	141	60
Naming	401	87	198	88	203	86
Knowledge source	254	55	144	65	110	46
All attitudes	193	42	97	44	96	41
Emotive attitudes	143	31	76	34	67	29

The analysis provided the following information. The results show that, within the content of the comments, four main categories of comments about body parts were identified. These were the front end of the body, the dimensions (shape, size, number, color, and covering), unfamiliar attributes² such as horns, excretory and reproductive organ, and attributes, which disrupted the body outline such as legs and a tail (Table 2). The attributes of the body, which were referred to most frequently were the dimensions (size, color, etc.) and the parts at the front end of the animals.

² “unfamiliar” means that they were not seen on all presented animals.

Table 2: Main Categories of Conversations about Body Parts amongst Primary School Groups at London Zoo

Category of body parts	Total conversations n=459		Conversations amongst groups with adults and children n=224		Conversations amongst groups with children only n=235	
	Number	Percentage	Number	Percentage	Number	Percentage
Front end	77	17	48	21	29	12
Dimensions	237	57	131	58	106	45
Unfamiliar	32	7	22	10	10	4
Disrupters	57	12	25	11	32	14

The most frequently observed behaviors that were commented upon were the position of the animal in the enclosure, movement, intermittent behaviors, which attracted the attention of the visitors such as urination and parental care, and feeding-related behavior (Table 3).

Table 3: Main Categories of Conversations about Behaviors amongst Primary School Groups at London Zoo

Category of behavior	Total conversations n=459		Conversations amongst groups with adults and children n=224		Conversations amongst groups with children only n=235	
	Number	Percentage	Number	Percentage	Number	Percentage
Movement	130	28	71	32	59	25
Position of animal	177	39	99	44	78	33
Feeding related	54	12	33	15	21	9
Attention drawing	115	25	61	27	54	22

Visitors gave their opinion or asked a question in 53% of all conversations. Comments revealing emotive attitudes such as “Ah! I like that” or “Ugh” occurred in 32% of conversations.

Expression of attitudes was surprisingly low whilst anthropomorphic comments occurred in 32% of all conversations and comments expressing concern about what the animal could do to them. For example, “Is it poisonous?” or what the visitor would like to do to the animal, “I’d like it as a pet” occurred in 16% of all conversations.

Visitors named or made a “naming” comment in 88% of all conversations and 47% of the names used were at the **family/genus level** of zoological taxonomy. Comparisons with the human form occurred in 5% of conversations and the common name such as “Black Rhino” was used in 16% of all conversations.

The data were analyzed further to find the content of the conversations within these super ordinate categories for the total number of conversations, those with and those without adults (Tables 2 and 3).

The main categories of body parts that were commented upon are shown in Table 2 and the main categories of behaviors that were remarked about are shown in Table 3.

The proportion of conversations about any category was higher in all cases when there was an adult present than when the children were in their own groups except for comments about parts of the body, for example, tails and legs that disrupted the outline of the body.

It is particularly interesting that the conversations about likes and dislikes (emotive) and anthropomorphic and human/animal interactions (all attitudes) were higher amongst the groups with an adult rather than in the groups of children alone. Table 1 shows that in almost two thirds of all conversations visitors commented about aspects of the exhibit other than the animal. Visitors are looking carefully at the “stage” upon which animals are presented as well as at the animal specimens.

4 Discussion

School groups are concerned predominantly with locating the animal and allocating it to a group using names with which the group members are familiar. The dimensions of the animal form the largest category of observational comments followed by remarks associated with the front end of the body. This observation is not surprising because human beings seek eye contact and usually look at the face of the human to whom they are communicating and it seems likely that this habit of seeking the face is carried into the observations the children and their accompa-

nying adults make when observing animals. However, the largest single topic of conversation is “naming” comments. The most frequent topic of conversation is associated with grouping the animal, providing it with a label. This is a fundamental human need (BRUNER et al. 1956, BRUNER 1983) and should be viewed by the zoo as the starting point for their interpretation. Furthermore, the popular name, which is likely to be the “everyday” term, is at the family/order level in terms of zoological hierarchical taxonomy. BERLIN (1973, 1978) reports that the basic terms for animals in an indigenous population was at the family level.

It will be a source of disappointment to zoos that the scientific name and other information provided through signage does not feature in the conversations of this segment of visitors and conversations about conservation, diet and natural habitat and geographical location, which are almost universally featured on zoo labels were not heard at all.

Groups commented about the dimensions of the animal the most but when a structure was obvious or unusual occurred in front of the visitors, they commented about it. There does not appear to be an active seeking out and mentioning of particular parts of the anatomy of the animals. Furthermore, the reference to the human body and to anthropomorphic interpretations is surprisingly low.

The content of the conversations about the body parts reveals that these visitors noticed the dimensions of the animal to a much greater extent than any other feature. The psychological research of TVERSKY (1985) shows that the shape and color of objects are the dimensions preferred by young children when they group inanimate objects, so it should not be surprising that it is this type of attribute that children notice about the animals.

The presence of an adult has an effect on the content of the conversations of the school groups. However, adults do not appear to dominate the conversation in affecting the content of the conversation other than focusing on the exhibits to a slightly greater extent. Conversations without an adult produced a lower number of comments about the identified categories except in the case of naming. Within the categories of body parts and behaviors however, if the four main groupings are considered, the children commented less about the attributes of the animals except in the case of the disrupters where the percentage of comments was higher (14%) for the children and only 11% for the groups with an adult. These results give no support for the idea that children actively seek out the excretory and reproductive organs of animals. They do however suggest that the presence of an adult focuses the children’s observations upon the animals to a greater extent than if the children

make the observations in the company of peers only. It is surprising that, contrary to my expectation, the emotive and affective comments about live animals were slightly higher when adults were present than when they were absent.

The results are important for organizers of school groups and for zoos. Both parties need to consider how the proportion of conversations about specific attributes that are the focus of the curriculum content for the visit can be increased by effective teaching strategies for the adult with the groups and for children making their observations without adult guidance.

The data from this study provide a baseline upon which zoos and their education departments can construct meaningful interpretation within the zoo and for the school visitors before and after their visit. The results suggest the visitors do not embark knowing nothing of animals but use their everyday knowledge and experiences in interpreting the exhibits and the adults accompanying the children increase the comments about the animals to small extent. The data indicate the existence of a pattern of categories of comments about live animals as exhibits passed by non-specialist visitors in zoos. Maybe the reason is that the teachers or the adults appear to possess little more additional knowledge about the specimens than the children themselves so they cannot develop the conversational content to any greater extent than the children alone are able to do. The adults emphasize the features that the children spontaneously notice. The attributes identified and the names used by the children appear to be representative of the everyday knowledge of animals in society and is an indication of the understanding of the public of this area of science. Furthermore, the results presented in this paper indicate that the fundamental occupation at a live animal collection is to "label" the specimen.

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Author

Dr. Sue Dale Tunnicliffe, School of Mathematics, Science and Technology, Institute of Education, University of London, 20 Bedford Way, London WC1H 0AL, UK; s.tunnicliffe@ioe.ac.uk