

## Consciousness—A Folk View

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The nature of consciousness in psychology is briefly described and an argument made for its folk theoretical exploration. Respondents, who were either psychology students or members of the general public, were asked to define consciousness, to say whether or not animals, young children and retarded people have consciousness, and to say what evidence led them to their conclusions. The respondents did not appear to share a coherent view of what consciousness is that could be applied to these marginal cases.

'Consciousness is both the most obvious and the most mysterious feature of our minds.' Thus, Dennett (1987) begins his brief essay on consciousness in Gregory's *Oxford Companion to the Mind*. As a straightforward introduction to the complexities of the status and role of consciousness in psychology, this piece is without peer. Much of what follows relies on it and on Dennett (1988), Hofstadter and Dennett (1991) and Hofstadter (1987).

As Dennett (1987) succinctly describes it, our day-to-day ideas of consciousness come from both inside and outside. When we are conscious (which we are not always) we *know* it. We also tend to view others who tell us that they are conscious as subjective beings like ourselves. However, not all creatures that we observe can tell us such things, so from the outside we look at them (at infants, chimps, whales, dogs, cats, earthworms, stones) and decide what aspects of what they do are relevant to our decision about whether or not they are conscious.

This distinction is instantly recognisable as one form of the problem of other minds and how we know of their existence. What determines what we count as pertinent to (or valid information about) our decision about whether other minds exist (or other subjects are conscious)? In the end, we choose some or other factors because they seem to make sense to us; it rarely becomes more sophisticated than this. What is sure is that language is *not* enough. It is not enough for us simply to be told by other beings that they exist or are conscious—a robot might tell us the same thing and we might not be convinced.

The present research investigates what people actually think about the consciousness of other creatures. Thus it concerns the folk psychology

of the other minds problem. Of course, this question may well relate to the questions of what consciousness is and what it is good for. Atkinson (1993) makes a strong argument (via Lyons, 1990) that folk psychology may be viewed as a craft or practice which tells a fair story about the way in which we function in the world. This view rests on the assumption that mental states have a content which comes from a mixture of the social and physical environment. So, even though there is a thriving area of cognitive research into consciousness (e.g. Davis and Humphreys, 1993; Dennett, 1991; Jackendorff, 1987; Shallice, 1991), the study of folk psychology remains legitimate (Oatley and Duncan, 1992).

The present study focused on the question of whether people thought animals, very young children, and mentally retarded people were conscious. These three groups were chosen because a pilot study indicated people had differing views on whether or not individuals in them were conscious.

### Method

#### Respondents

Two separate samples were questioned, one of psychology students and one of members of the general public.

The 98 student respondents were enrolled in a third-year course in psychology. Thirty-two were male, and their average age was 23.4 years with a range from 19 to 60.

For the general public sample, 12 student interviewers were each asked to locate and interview 6 (one interviewer questioned 15) respondents from their acquaintance, 3 male 3 female and preferably from a range of age groups and occupations, who were not currently students at the University of Canterbury. This sample comprised 41 men and 40 women. The average

age was 38 years with a range from 13 to 87. The respondents pursued a wide variety of occupations.

#### *Procedure*

Paper was distributed to the student sample and questions were displayed successively on an overhead projector. Subjects were asked to write brief responses to each question.

The first question asked: 'Do you think animals are conscious or aware in the way we are? Why? Please try to remember and give a brief description of an incident or type of incident which has influenced your decision.' The second and third questions were identical to the first except that 'very young children (2 to 3 months old)' and 'retarded people' were substituted for 'animals'.

When these questions had been answered, subjects were asked to write down a brief definition of what they understood consciousness to be. Finally they were asked to indicate their age and sex and how much contact they had had with animals, very young children, and retarded people.

General public respondents were interviewed individually and in private, usually at home. The interviewers were instructed not to enter into discussion with the respondents nor to try to define consciousness for them. The same questions were put as to the students and in the same order. The interviewers either wrote down the responses as they occurred or taped them for later transcription.

#### *Results*

Four separate variables were created from the responses to each of the animal, very young children, and retarded people questions. The choice of these variables and the categories used in each variable were suggested by a first reading of the responses and slightly modified by later coding. The first variable recorded the decision made about consciousness into one of four categories (three for very young children): conscious; not conscious; possessing limited consciousness; depends on the species of animal or, respectively, degree of retardation. The second variable coded whether the decision seemed to be based primarily on observation (e.g. 'When you call to your pet it comes, so it must know what it means.'). or on a theoretical reason (e.g. "[Children] have not learnt enough about their world to have consciousness similar to an adult.'). Of course, the coding did not take into account the cogency of the reason given.

The third variable coded the type of observation (if one was made) in six categories:

1) responds to emotion. For example, 'My mother hurt her back and our cat curled up round her

neck, licked her, and fretted as Mum lay on the floor';

- 2) shows or appears to show emotion or pain;
- 3) communicates with adults or interprets adult human behaviour.  
(This category included manipulative behaviour.)
- 4) responds to or interacts with the environment.
- 5) shows evidence of learning, memory, or other cognitive ability. A frequent example for animals and very young children was apparent ability to discriminate owners or parents from other people.
- 6) other responses.

Categories could also be used negatively. An example of this use with cognitive ability is: 'No [Retarded people are not conscious]—having to explain toilet training repeatedly for six months to an eighteen year old confirms this.'

The fourth variable coded the level of contact the subject claimed with the class into none, very little, some, or a great deal<sup>1</sup>.

Finally, five categories of consciousness definition were created: awareness of the environment or sensory awareness; awareness of the environment and of one's place in it or intending to influence it; some kind of cognitive ability, for example, imagination or thought; self-awareness; awareness of the existence of others.

Coding was carried out by the first author and an independent coder. Overall, 78 percent agreement was achieved on the first coding with the student sample responses and 82 percent agreement with the general public responses. Differences were reconciled by agreement.

The results obtained from the two samples were rather similar, and hence the analysis presented here was carried out on the pooled sample. Difference between the samples are presented at the end of this section.

Table 1 shows whether respondents believed animals, very young children or retarded people are conscious. Clearly, there were considerable differences between respondents in their answers. This is itself an interesting result since it indicates that the respondents did not share a clearcut idea of who is or is not conscious. The result also suggests further analysis to attempt to account for the lack of consensus.

<sup>1</sup> Theoretical reasons were also coded although the results are not presented here. Theoretical reasons were relatively few compared to observational reasons, and meaningful patterns, perhaps in consequence, were not apparent.

Table 1: *Percentages of subjects deciding that animals, very young children, or retarded people are conscious.*

Decision	Animals	Children	Retarded
Conscious	49.2	43.6	41.9
Not conscious	24.6	34.1	14.0
Limited consciousness	16.2	19.6	11.7
Depends on species or retardation	8.9	—	30.2
No response	1.1	2.8	2.2

Table 2: *Percentage of respondents choosing different types of consciousness definitions, and the percentage of respondents choosing that definition who regarded animals, very young children, or retarded people as conscious or conscious depending on animal species or degree of retardation.*

Definition	% choosing defn	% regarding as conscious		
		animals	children	retarded
Aware of environment	40.8	65.7	51.5	75.4
Aware of environment & oneself	23.0	69.2	48.7	79.5
Cognitive ability	16.1	46.4	35.7	57.1
Self awareness	14.4	44.0	40.0	84.0
Awareness of others	5.7	50.0	11.1	77.8

One possibility is that differences in opinion might have come about because respondents adopted different definitions of consciousness. As Table 2 shows, the respondents did produce a variety of definitions of consciousness, with awareness of the environment as the most frequent. Also shown in the table is the percentage of respondents giving each definition who either concluded that the class (animals, very young children, or retarded people) were conscious or that, depending on species or degree of retardation, some members of it were conscious. There were no significant associations between the consciousness definitions used and the percentage of respondents regarding the class or some members of it as conscious for animals ( $\chi^2[4, n = 172] = 7.5, n.s.$ ), very young children ( $\chi^2[4, n = 169] = 6.8, n.s.$ ), or retarded people ( $\chi^2[4, n = 170] = 6.2, n.s.$ ). Thus individual differences in deciding whether animals, very young children or retarded people are conscious cannot be substantially attributed to differences in the respondent's notion of consciousness.

Respondents who believed animals or some species of animals were conscious also tended to think very young children were conscious ( $\chi^2[1, n = 172] = 22.9, p < .01$ ). Similarly, those believ-

ing retarded people or some retarded people were conscious also tended to believe animals or some species of animal ( $\chi^2[1, n = 173] = 4.9, p < .05$ ) and very young children ( $\chi^2[1, n = 171] = 6.7, p < .01$ ) were conscious. However, there is no evidence for consensus about which of animals, children or retarded people were most likely to be conscious. For example, 20 respondents stated that animals or some species of them were conscious while retarded people were not, while 47 claimed that retarded people, or at least some retarded people, were conscious but animals were not.

One hundred and fifty-three respondents reported some or much contact with animals, while 104 had had some or much contact with very young children and 61 had had some or much contact with retarded people. There was no significant relationship between having some or much contact with animals ( $\chi^2[3, n = 172] = 3.2, n.s.$ ), very young children ( $\chi^2[2, n = 169] = 3.6, n.s.$ ) or retarded people ( $\chi^2[3, n = 167] = 1.4, n.s.$ ) and respondents' decisions about their consciousness.

Table 3 indicates whether respondents appeared to base their decisions on observational or theoretical grounds. Observational justification was

Table 3: *Percentage of respondents giving observational, theoretical, or no justification for their consciousness decisions. Observations are subclassified by type of observation.*

Justification	Animals	Children	Retarded
Observation, including:	59.8	39.1	33.0
Senses emotion	13.4	4.5	3.9
Shows emotion	9.5	3.4	8.4
Communicates etc.	12.8	6.1	6.7
Environmental interaction	8.4	8.4	3.4
Cognitive ability	12.8	8.9	6.1
Other observation	3.4	7.8	4.5
Theoretical grounds	19.5	28.5	21.2
No reason given	20.7	32.4	45.8

most frequently cited with animal consciousness decisions and least frequently with respect to retardate consciousness, a result that may reflect the apparently greater contact the sample had with animals than with retarded people. Theoretical justifications were used rather evenly across the three classes. There was a significant relationship between consciousness decision and type of justification (observation, theory, or none) for both animals ( $\chi^2[6, n = 177] = 51.9, p < .01$ ) and very young children ( $\chi^2[4, n = 174] = 14.0, p < .01$ ), but not for retarded people ( $\chi^2[6, n = 175] = 11.1, n.s.$ ). Observations were used to support decisions that the animal or very young children were conscious, while theoretical reasons or no reason at all tended to accompany statements that animals or children were not conscious or had limited consciousness.

The types of observations that were recalled by the sample are also shown in Table 3. Observations involving communication or interaction with humans or prediction of their behaviour (e.g. a dog reacting to a family packing up to go on holiday) were frequent with respect to animals and retarded people. For very young children, the observations most often had to do with their interaction with, or prediction of, some feature of the environment (e.g. exploration). Also noteworthy is the relatively high frequency with which apparent sensing or showing of emotion were mentioned. Only five respondents mentioned linguistic behaviour as a factor in their decision, one in rejecting and one in supporting (via a talking parrot) the idea of animal consciousness, one to argue the consciousness of retarded people, and two in reasoning that very young children were not conscious.

Generally the two samples produced rather

similar results, but there were some noteworthy differences. There were no significant differences in definitions of consciousness between the samples ( $\chi^2[4, n = 174] = 3.04, n.s.$ ), and there was no significant difference in the consciousness status assigned to mentally retarded people ( $\chi^2[3, n = 175] = 5.3, n.s.$ ). However, there was a significant tendency for the students to be more likely to credit animals ( $\chi^2[3, n = 177] = 10.3, p < .05$ ) and very young children ( $\chi^2[2, n = 174] = 7.7, < .05$ ) with consciousness. Of the students, 56.1 percent believed animals were conscious and 53.1 percent believed very young children were conscious, while the corresponding figures for the general public sample were 40.7 and 32.1 percent.

#### Discussion

Perhaps the most important general result to emerge from the research is the negative one that people simply do not share a coherent view of what consciousness is that can be applied to the marginal cases examined here. Clearly the respondents had very different views about whether animals, very young children and mentally retarded people were conscious.

Moreover, while overall decisions about one class had statistical implications for whether members of another class were regarded as conscious, there was no evidence for a hierarchy of consciousness for the three marginal classes. People could have ordered the classes by their probability of being conscious: for example, it might be believed that animals, very young children, and retarded people, in that order, are increasingly likely to be conscious. Our results, however, show that, while individuals may have done this, different respondents did not use the same orderings.

There was no consensus about what con-

sciousness is and a number of rather different definitions were used. Nor can the variability in people's decisions about the consciousness of members of the three classes be attributed to differences in what the respondents understood consciousness to be. Thus, rather than having a coherent idea of consciousness that they could apply in a more or less consistent way to the marginal cases presented here, the respondents of the present studies seemed to approach the cases with a rather fuzzy set of ideas that may even have been partially thought out while responding.

It might be objected to the present study that, by requiring respondents to define consciousness after rather than before making decisions regarding the consciousness of animals, very young children and mentally retarded people, they were more likely to produce fuzzy than coherent results. Such an effect might also have been enhanced by the question wording: 'Do you think X are conscious or aware in the way we are?' Such objections, however, miss the point that if the respondents had a well-defined construct of consciousness of their own at the outset the study gave them every opportunity to make use of it.

On the other hand, the present results do not suffice to show whether at one extreme very few respondents have any notion of consciousness at all or at the other whether respondents generally do have well-defined constructs of consciousness but that these differ between individuals.

It is perhaps worth remarking that the apparent uncertainty in the collective view of our respondents is reflected by those researching consciousness. Zelazo and Reznick (1990, p.631) remark: 'At present, we not only lack direct evidence of infant consciousness, but we also have no clear idea of what that evidence would look like.' This uncertainty also appears, for example, in research attempting to investigate the awareness of creatures that do not talk by observing how they behave when confronted with mirrors (e.g. Gallup and McClure, 1971; Loveland, 1987; Robinson, Connell, McKenzie and Day, 1990). Precisely what behaviour indicates self-awareness in this situation?

The two samples used could reasonably be supposed to differ in their knowledge of psychology. However, the third-year psychology students, all of whom had had at least an introduction to the concepts of contemporary cognitive psychology, did not as a group show any more consensus about the nature of consciousness than the general pub-

lic sample, although they were more willing to credit animals and very young children with consciousness.

The observations proposed as evidence for, or more unusually against, animals, children or retarded people being conscious are also interesting. At face value, the apparent unconcern about language as a criterion for consciousness is surprising. In particular it is striking that more respondents did not remark on the fact that more retarded people generally speak, while animals and very young children do not. On the other hand, it appears that, in the tangled wool that people's notions of consciousness appears to resemble, emotion is a conspicuous thread. This result recalls the work of Mandler (e.g. 1984, 1992), who has long proposed links between consciousness and emotion.

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