

Is a jumper angrier than a tree?



AMANDA WATERMAN, MARK BLADES and CHRISTOPHER SPENCER ask nonsensical questions – but their research has serious implications for anyone who interviews children.

ASK one of your colleagues whether a jumper was angrier than a tree, and they might well suggest you go and have a lie down, or make yourself a nice cup of tea. But what if you asked a child? Would a five-year-old be likely to ask if you were getting enough sleep, or say that the question can't be sensibly answered? Results from a study by Hughes and Grieve (1980) suggested that children do not, in fact, ask for clarification or indicate any uncertainty when asked a nonsensical question. Instead, they try to give an answer to the question. In this article we will explore reasons why and the implications for research and legal settings.

Is red heavier than yellow?

In the Hughes and Grieve study, five- and seven-year-olds were asked four bizarre questions, including 'Is red heavier than yellow?' and 'One day there were two flies crawling up a wall. Which fly got to the top first?' Despite the bizarre nature of these questions, Hughes and Grieve found that virtually all of the children answered all of the questions. In a similar study Pratt (1990) asked young children a series of nonsensical questions (e.g. 'Is a fork happier than a knife?'). Pratt found that rather than saying the questions were silly, almost all the children gave answers.

These studies have been frequently cited to show that children's willingness to answer a question does not necessarily mean they understand what they have been asked. In particular, the studies have been quoted in the literature on interviewing techniques, for example the child eyewitness literature, and cited as evidence that children may answer questions without any understanding of the question (e.g. Bruck & Ceci, 1999; Lamb *et al.*, 1998).

However, there are several ways in which studies of this kind were limited. For example, if children in the Hughes and Grieve study answered 'don't know' to one of the unanswerable questions, this was not accepted as an answer and the question was repeated. In fact, one quarter of the children initially said 'don't know' to one of the questions, but when the question was repeated each of the children gave an answer. Given that young children (and adults) may use 'don't know' as a way to indicate uncertainty about a question (Moston, 1987), it is surprising that this type of response was not accepted as a valid reply to an unanswerable question.

Also, the findings from both studies were based largely on participants'

responses to 'closed' questions – those that only require a *yes* or *no* response. Other researchers have shown that the accuracy of children's responses to questions about an event can be influenced by whether the question only requires a yes/no response (e.g. Gordon & Follmer, 1994; Peterson *et al.*, 1999; Walker & Hunt, 1998). For example, in the study by Peterson *et al.* young children participated in a staged event, and were then interviewed about the event a week later. The children were less accurate when answering closed questions than when answering open questions (*what? where? when?* etc., sometimes called 'wh-questions'). Given these results, we thought that question format (i.e. closed or open) might also affect children's responses to nonsensical questions.

How you ask is what you get

To find out if children do always answer nonsensical questions, we replicated and expanded the studies by Pratt, and Hughes and Gieves. In particular, we investigated the effect of question format on children's tendency to answer a nonsensical question (e.g. Waterman *et al.*, 2000, 2001). We asked five- to eight-year-olds a series of questions: half were nonsensical, half sensible. The questions were either in a closed format, therefore only requiring a yes/no response, or they were open questions requiring participants to generate their own answer. Before they were given the questions, children were told that it was OK to say if they did not know the answer or did not understand the question.

We found that children performed at ceiling for all the sensible questions – the children were not so confused by the task that they could not answer any questions at all. For the nonsensical questions there was a large effect of format. Three-quarters of

EXAMPLES OF QUESTIONS

Nonsensical

closed 'Is red heavier than yellow?'

open 'What do feet have for breakfast?'

Sensible

closed 'Is a bus longer than a car?'

open 'What do birds eat?'

the responses to the closed questions were 'yes' or 'no', and this replicated the results from Hughes and Grieve (1980) and Pratt (1990). However, in response to the nonsensical open questions almost all the children said that they did not understand the question or did not know the answer. This suggested that children do not always try to answer nonsensical questions; they only try to answer nonsensical questions requiring a yes/no response.

Possible explanations

Why do children attempt to answer closed nonsensical questions? One explanation is that the children think that such questions are sensible ones and that there is a correct answer. We investigated this in a follow-up study: three weeks after the initial testing we went back to the same children and went through the same list of questions again. However, this time, instead of asking the children to answer the questions, we asked the children to say whether they thought the questions were silly or sensible. Almost all of the children said that the nonsensical questions (both closed and open questions) were silly, and were able to explain why the questions were silly; for example, 'Cos feet don't eat anything for breakfast' or 'Feet don't eat! They haven't got any mouths'. In other words, the children fully recognised that the nonsensical closed questions were silly, and yet, three weeks before, these same children had answered them.

One way of trying to interpret children's responses to nonsensical closed questions is to refer to the Gricean paradigm of conversational norms. Grice (1975) suggested that all conversations have certain unspoken rules, or principles, that guide the participants through the communicative exchange. In order to have a 'co-operative' conversation, Grice suggested that people need to adhere to the principles of quality, quantity, relation and manner, each of which is associated with several maxims, for example 'be relevant', 'avoid ambiguity' and 'be truthful'.

Children tend to assume that adults will operate according to these principles when conducting a conversation, and may be confused when adults violate one or more of these maxims (see Siegal, 1997, for a discussion). In fact, researchers have shown that whereas adults tend to understand the reasons why maxims may be violated – such as in the use of sarcasm – young children do not (e.g. Demorest *et al.*, 1984; Siegal & Peterson, 1994). Therefore, in the research on nonsensical questions, children

may have assumed that the experimenters were operating according to the maxims of 'avoid ambiguity' and 'be relevant', and treated the questions as sincere requests.

However, there is a problem with this explanation. If children were treating the nonsensical questions as sincere requests then we would have expected children to try to answer all of the nonsensical questions. For example, we would have expected children to make suggestions as to what feet might eat for breakfast. Our results showed that while a very small number of children did provide an answer to this question (e.g. 'Weetabix', 'toenails'), the vast majority of children's responses (95 per cent) to nonsensical open questions indicated that these questions could not be answered. Therefore, the Gricean paradigm does not appear to be able to explain the pattern of results we obtained in our studies: it does not account for the large effect of question format on children's responses.

Same response, different meanings?

In thinking further about the effect of question format on children's responses, we wondered what children had meant to communicate when they answered a closed nonsensical question. Most of the children who responded to this type of question gave the answer 'no'. This response could have meant either that the child had considered the proposition in the question seriously and had decided to reject it, or that they were denying the proposition itself. For example, when children said 'no' to the question 'Is a jumper angrier than a tree?', their answer might mean 'no, because trees are angrier than jumpers' or, 'no, because jumpers aren't angry at all'. Therefore, children who responded 'no' might have been expressing disagreement with the nonsensical nature of the question, but because they did not elaborate on their answer they appeared to be answering a nonsensical question.

Potential misunderstanding of a child's response when they do not elaborate on an answer can be a problem in many contexts, not least in court situations. Walker (1993) gave examples in the testimony of a five-year-old girl who had allegedly witnessed a murder. The following is an exchange between the child and a lawyer (p.70):

Adult: *Do you remember Martha asking you, 'Do you know who Mark is?'*

Child: *Yeah.*

An adult is likely to interpret the child's

response as meaning 'yeah, I remember'. However, another exchange highlights the problems with this interpretation (p.71):

Adult: *Do you remember when Don asked you, 'What colour was their skin, like mine or like Martha's?'*

Child: *Like yours.*

In the second example it is obvious that the child is responding only to the second part of the question, namely the question embedded within the question. Therefore, in the first example the child's response of 'yeah' could mean 'yeah, I know who Mark is', as opposed to 'yeah, I remember'. So, when children give yes/no answers and do not elaborate on their answers, adults might misinterpret what a child means.

To clarify what children meant when they said 'no' in answer to a nonsensical question, we asked children to explain their answers (Waterman *et al.*, 2001). When children said 'no' to a question like 'Is a jumper angrier than a tree?', we asked them why they had said 'no'. Some children's explanations referred to the fact that jumpers were not angrier because trees were the more angry ('if someone climbs on the tree and breaks its branch then it's very, very, very cross', and 'well, a tree's got to be angrier cos it just sits there being bored all day'). However, other children's explanations referred to the fact that the question was silly ('jumpers don't have madness or anything like that' or 'jumpers and trees can't be angry').

These examples show that different children, despite giving the same initial response, meant quite different things. When a child responds to a closed question in an interview, the adult interviewer may interpret the response to mean one thing

when the child in fact means something different.

Ambiguous questions and ambiguous answers

So in contrast to previous research our studies have shown that children do not always answer nonsensical questions. If the question required the child to generate their own answer (i.e. an open question) then the majority of children indicated they did not understand. In contrast, if the nonsensical question only required a *yes* or *no* response, most children gave one of these responses rather than indicating uncertainty. However, even when children did answer nonsensical closed questions with a *no* response, many of the children used this response to mean that they could not answer the question, or to indicate that they thought the question was silly.

Of course, children are unlikely to be asked whether jumpers are more or less angry than trees in a real-life interview. But there may be some contexts in which children are asked questions that, owing to their complexity or phrasing, seem equally bizarre or nonsensical to the child (e.g. Carter *et al.*, 1996). Adults should be cautious in interpreting children's responses to ambiguous questions. We assume from our research that children will often say explicitly that they do not understand a question when that question is phrased in a more open format, but there may be times when children respond to yes/no questions in an ambiguous way.

What about sensible unanswerable questions?

These findings support other research on children's responses to yes/no questions. As mentioned above, researchers have shown that the accuracy of children's responses to questions about an event is affected by question format. These types of study generally stage an event for children, or make use of a real-life event (such as a visit to the doctors), and question children about the event after a delay. The phrasing of the questions is varied, but in most cases each question is potentially answerable. Results from these studies show that children's accuracy in responding to yes/no questions is lower than with open questions or requests for very general information (e.g. 'What happened?').

Our studies have shown that children are not only less likely to be accurate in response to a closed question, but that they may also fail to indicate when they are unable to answer or do not understand the

question. Because of these potential implications for real-life interview contexts, we decided to investigate whether the effect of question format would transfer to contexts where the questions were sensibly phrased, but were still ones that children were unable to answer.

In one of our studies (Waterman *et al.*, in press) children were read a story and then asked questions about the story. Some of the questions could be answered from information that they had just heard, but some questions were unanswerable because no relevant information had been included in the story. For the latter questions the only appropriate answer was to say 'I don't know'. However, as with the nonsensical questions, we found an effect for format on whether children were willing to say 'don't know' to an unanswerable question. If children were asked an unanswerable open question they were more likely to say 'don't know' than if they were asked an unanswerable closed question. For the latter questions, the majority (76 per cent) of the responses were 'yes' or 'no', even though the children had no knowledge of the answer.

Another more recent study using a staged event, rather than a story, has also found a similar effect of question format on children's tendency to admit when they do not know the answer. Therefore, the effect of format appears to be robust across different contexts. Children are more likely to try to answer a question inappropriately, than to indicate that they do not know the answer, if that question requires a yes/no response.

To investigate whether question format only affected children's responses, these later studies also included adult participants. We found that although the majority of adults correctly indicated when they did not know the answer to a closed question, they did not perform at ceiling. With the unanswerable open questions, nearly all of the adults' responses were 'don't know'. However, for the unanswerable closed questions, 20 per cent of the responses were 'yes' or 'no' – an inappropriate answer. These results showed that question format may have a stronger effect on children's tendency to admit when they do not know the answer, but that it does have some effect on adult's responses to unanswerable questions.

The problem with closed questions

So, what is it about closed questions? Why are children, and to a lesser extent adults,

tempted to answer unanswerable questions if they require a 'yes' or 'no' response? As Peterson *et al.* (1999) have pointed out, a closed question contains a predetermined response, and an answer is therefore readily available. With an open question, even one that asks for specific information, an answer has to be generated. This may act to deter interviewees from guessing the answer. In contrast, the accessibility of a yes/no response may lead to interviewees simply providing one of these options.

In reality, this accessibility of a yes/no response is likely to interact with other factors in interview situations to affect whether an interviewee will indicate when they do not know the answer. For example, interviewees (especially young children) may feel pressure to provide an answer when asked a question by an 'authority figure' such as a researcher, a clinician or a teacher. In fact, researchers have shown that children are more likely to be susceptible to suggestibility when the misleading information is provided by an adult as opposed to another child (e.g. Ceci *et al.*, 1987). Ceci *et al.* told young children a story, then gave them incorrect information about the story, and finally interviewed them about what happened in the story. They found that the children were less likely to incorporate the incorrect information when it was provided by another child rather than an adult. So children can be influenced by the social 'demand characteristics' in an interview context, and may go along with what they perceive an adult interviewer wants to hear.

percentage of closed questions (e.g. Davies *et al.*, 2000).

However, the results from our studies suggest that interviewers in any of these situations should be cautious in their use of closed questions. A closed question may prompt a *yes* or a *no* response from an interviewee, but this should not necessarily be taken to indicate that he or she has fully understood the question, or that the response genuinely reflects his or her knowledge – especially when the interviewee is a young child. In addition, use of closed questions, particularly ones that are ambiguous, may lead to the interviewer misunderstanding what the interviewee has meant to communicate. As discussed earlier, children who gave the same response (e.g. ‘no’) to the same nonsensical closed question often meant different things by that response.

On the basis of our results we suggest that interviewers should use open questions as much as possible. If a child is not providing the required details to general requests for information (e.g. ‘Tell me everything you can remember’), and more specific questions need to be asked, then interviewers should aim to phrase the specific question as an open question (e.g. ‘What room were you in?’) rather than as a closed question (‘Were you in the kitchen?’). In addition, psychologists may need to be cautious in interpreting results of experimental testing (such as tasks to assess aspects of cognitive or social development) where children were

tested solely by means of closed questions. Do the answers to these questions reflect the child’s level of ability, or have the children responded to these closed questions rather than indicating uncertainty because of the accessibility of a *yes* or *no* answer?

Conclusion

Asking questions is a fundamental part of communication, and as such will be an important factor in the work of many professionals, not least psychologists. Therefore, understanding the best way to phrase questions, and the potential effects of the social demands of an interview, is clearly important. Although interviewers are unlikely to ask children to compare the emotional stability of trees and jumpers, children may still find adults’ questions difficult to interpret or understand. Consequently, anyone who regularly has to question children should take some time to consider the appropriateness of their questioning techniques and should exercise caution in interpreting children’s responses, especially to closed questions.

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Implications

These findings have implications for many different areas of psychology. Children, and adults, are questioned in a variety of contexts – for example, in the classroom, in clinical interviews, when giving evidence in the forensic setting, and when taking part in experimental psychology research. In all of these contexts interviewers are likely to use some closed questions to obtain information. In fact, researchers who have analysed transcripts of interviews in the forensic context have shown that interviewers use a high

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