Letters to the Editor

Perceptual Access and Knowledge

Since its introduction by Koenig, Clément and Harris in 2004, the selective trust paradigm has been widely used to explore children's developing epistemic understanding. Lucas and Lewis [2010] provided a welcome and long overdue critique of the procedure, exploring the conditions under which one might validly test a child's epistemic understanding.

One important aspect of epistemic awareness is the appreciation of how experiences lead to knowledge, or, as Lucas and Lewis [2010] put it, 'who is likely to know what in each unique learning situation' (p. 169). This forms the basis for their argument that any valid test of epistemic awareness should include a good reason for the inaccurate speaker's inaccuracy. Somewhat surprisingly, they discount the use of perceptual access as a plausible reason. Instead, they find solutions in a lack of exposure to common information (such as might be seen in foreign – or fantasy – speakers), or in a lack of expertise in a particular domain of knowledge (such as a speaker who is good at vocabulary but bad at spelling). Their dismissal of perceptual access reasons for inaccuracy is needlessly limiting.

Lucas and Lewis [2010] argued that the kind of inaccuracy caused by a lack of perceptual access is temporary, and describe it as knowledge as a state. Instead, they are interested in children's understanding of long-term, stable states of knowledge, or knowledge as a trait. In either case, whether ignorance is obtained by a failure to see the target object, or whether it's obtained by being a foreign speaker, it is a temporary state. Happily, we always have the possibility of filling the gaps in our knowledge, however long we might have struggled with them. It is not clear how the length of time a speaker suffered ignorance is of critical importance in judging epistemic awareness. Children's understanding of the more subtle nuances of domains of knowledge or expertise are certainly important [see Danovitch & Keil, 2004], but these are not the only conditions in which children can reveal their appreciation of the link between experience and knowledge.
Indeed, in some cases the only evidence for the more nuanced interpretation might be a speaker's history of repeated inaccuracy. Lucas and Lewis [2010] offered the example of Owl, from Winnie the Pooh. Owl enjoys a large and varied vocabulary, but is useless at spelling. Lucas and Lewis proposed that this lack of expertise itself constitutes a good reason for Owl's inaccurate spelling. Importantly, the only way we know that Owl is poor at spelling is that he has been repeatedly and consistently inaccurate -- the same information we are given about the actor who consistently mislabels familiar objects. In neither case are we given additional reasons for this lack of expertise, but are left to infer it from his repeated errors. Children do seem to appreciate that Owl is competent aside from spelling; similarly, a speaker who mislabels common objects is treated as untrustworthy for object names, but is believed when he matches hidden toys to pictures [Brosseau-Liard & Birch, in press].

It is not altogether clear how young children conceptualise these more complex reasons a speaker might err. However, we do know they appreciate that a lack of perceptual access can be a barrier to knowledge. By manipulating an inaccurate speaker's perceptual access, we can test whether children do appreciate the link between experience and knowledge, taking into consideration reasons for inaccuracy. For example, a speaker might misidentify the colour of a hidden toy after looking at it or after only touching it. Under these conditions, children forgive a speaker who errs three times while guessing (after touching the toy), believing him later when he is well-informed, but they mistrust a speaker who errs three times despite being fully informed [Nurmsoo & Robinson, 2009a]. Children can also reason about the nature of the error itself. In a study using misleading boxes (e.g., a crayon box containing a small toy cat), children were once again more likely to trust a speaker who misidentified the contents without looking inside, than one who erred despite looking. Importantly, however, the most forgiving children were those who could explain why the ignorant speaker made the errors she did (e.g., she mistakenly said crayons 'because it had pictures of crayons on the outside') [Robinson & Nurmsoo, 2009]. By exploiting children's ability to reason about the relationship between a lack of perceptual access and ignorance, we can reveal aspects of their epistemic awareness.

The methods used in these studies differ from the selective trust paradigm critiqued by Lucas and Lewis [2010]. Interestingly, when a speaker's perceptual access was manipulated in the traditional paradigm, with one speaker mislabelling objects while blindfolded, children did not forgive the blindfolded speaker even when she was contrasted with a speaker who erred for no observable reason [Nurmsoo & Robinson 2009b]. It is not immediately clear why children appropriately consider an inaccurate speaker's perceptual access in some conditions, but not in the selective trust paradigm. In light of this discrepancy, it is particularly valuable to explore and critique the methods used to study early epistemic understanding, as Lucas and Lewis have done.
Children’s epistemic awareness can be revealed, in part, through an appreciation of the link between experience and knowledge. This link need not be limited to complex cases such as foreign nationality or domains of expertise, however. Children’s early epistemic understanding can be fruitfully explored using skills such as their understanding of perceptual access.

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References


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Inaccurate Speakers Are Not Always Less Knowledgeable

In their discussion of ‘selective trust paradigms,’ Lucas and Lewis [2010] wondered whether children think that less accurate speakers are less knowledgeable. They stressed the fact that children might consider inaccurate speakers as ‘globally incompetent or bizarre, rather than misinformed’ (p. 168). I would like to complement their thoughts by focusing on another issue: the ambiguity of inaccuracy as a cue of a speaker’s knowledge.

In several versions of the ‘selective trust paradigms,’ children face a speaker who mislabels or misuses common objects (e.g., says ‘That’s a shoe’ when speaking of a ball) [Koenig & Harris, 2005, experiment 1]. Now, a speaker’s inaccuracy can have many causes. Sometimes, speakers unwittingly lack accuracy, because they are mistaken, or ignorant. But in other cases, speakers lack accuracy without lacking knowledge, for example when they joke, deceive, or are ironical. As a result, children may not always think that less accurate speakers are less knowledgeable. Indeed, when children were asked to explain why a speaker who consistently misnamed familiar objects was ‘not good at answering questions,’ they provided a variety of explanations [Koenig & Harris, 2005, experiment 1]. Some children did refer to the inaccurate speaker’s lack of knowledge (30.8%). But other participants alluded to the speaker’s moral dispositions (12.8%), to pretence (7.7 %), used behavioural explanations (12.8%), refused to answer, or were unable to do it (35.9%). As a result, tests involving only inaccuracy as an indicator of a speaker’s knowledge face 2 types of problems. First, as pointed out by Lucas and Lewis [2010], they may overestimate children’s understanding of speakers’ knowledge. If children think that less accurate speakers are more likely to joke, or to lie, they would have reasons to trust these informants less. Second, tests using inaccuracy as a cue may also underestimate children’s understanding of speakers’ knowledge, if they do not allow establishing unambiguously that the inaccuracy of speakers comes from a lack of knowledge.

Lucas and Lewis’ [2010] suggestion to provide reasons for informants’ inaccuracies such as ‘(a) a lack of exposure to conventional information, or (b) a lack of expertise’ may help children to disambiguate why some speakers are more accurate than others (p. 169). A similar methodological strategy has been employed in several studies. In some selective trust experiments, for example, children have to choose between trusting an accurate informant, or a speaker who explicitly says that she does not know how familiar objects are called [Koenig & Harris, 2005, experiments 2 and 3]. In these cases, the less trustworthy speaker disambiguated why she did not provide a label for familiar objects by claiming that she lacked knowledge. Interestingly, this type of experimental manipulation seems to improve young children’s capacity to selectively trust informants. For example, in experiment 1 of Koenig and Harris [2005], 3-year-
olds did not trust accurate informants more than inaccurate informants. However, in a similar experiment [Koenig & Harris, 2005, experiment 2], they trusted accurate speakers more than speakers who claimed to be ignorant. Moreover, children referred more readily to the knowledge of speakers who claimed to be ignorant to explain why they were ‘not good at answering questions’ (in Koenig & Harris [2005], 45.2% of the children did so in experiment 2, and 65.8% did so in experiment 3). As a result, making clearer why a speaker is less reliable may help children to determine why some informants are unable to provide accurate answers, and to trust informants selectively.

As Lucas and Lewis [2010] insisted, enabling children to assess speakers’ knowledge is not enough. It is also fundamental to have appropriate tests to ensure that children do assess speakers’ knowledge. Lucas and Lewis suggested 2 solutions to better test for children’s attribution of knowledge: ‘investigating children’s ability to (a) predict or (b) forgive inaccuracy’ (p. 169). These 2 measures can add a lot to our understanding of children’s social learning. The ability to predict inaccuracies is evidence of the attribution of a disposition to be inaccurate. The capacity to understand that speaker’s inaccuracy may be limited to certain domains, that Lucas and Lewis named ‘forgiveness of inaccuracy’, allows investigating the capacity to trust by domains (p. 170).

However, predicting and forgiving inaccuracy does not always require assessing a speaker’s knowledge. For example, if children think that a previously inaccurate speaker is more likely to joke or to lie, this can allow them to predict that this speaker will be more inaccurate. In the same way, forgiveness of inaccuracy is not always founded upon the assessment of speakers’ knowledge. For example, an unfaithful husband may lie about his love life, while still being honest in his professional interactions. On the other hand, a crook may lie about his professional activities, while remaining honest about his love life. The unfaithful husband and the crook are both inaccurate in certain domains, while remaining trustworthy in other domains. But this pattern of inaccuracy can be inferred from their propensity to lie, not from their lack of knowledge. As a result, it is not sufficient to show that children can predict or forgive inaccuracy to establish that they are sensitive to a speaker’s knowledge. Additional measures should be added to control for the ambiguity of inaccuracy, some of which have already been implemented in the literature. Asking children about the reason for a speaker’s inaccuracy is one way to do so [e.g., Koenig & Harris, 2005]. Studies in which one tests whether children attribute false beliefs to previously inaccurate speakers [e.g., Poulin-Dubois & Chow, 2009] are also pointing in this direction.

Inaccurate speakers are not always seen as less knowledgeable. This ambiguity raises methodological challenges for people who want to study children’s assessments of speakers’
knowledge. But more importantly, it shows the potential of studies of children’s trust. Children’s and infants’ sensitivity to inaccuracy gives reasons to investigate further their understanding of a speaker’s knowledge, but also their understanding of variety of communicative acts and attitudes: jokes, lies, and pretence. Taken seriously, concerns about the strategy that children use to deal with a speaker’s inaccuracy will pave the way for investigations of young children’s and infants’ understanding of knowledge, but also of various aspects of communication and social cognition.

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References

