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Why should I trust you? Investigating young children's spontaneous mistrust in potential deceivers

Roman Stengelin[a,b,*], Sebastian Grueneisen[a,c], Michael Tomasello[a,d]

[a] Max Planck Institute for Evolutionary Anthropology, Deutscher Platz 6, 04103 Leipzig, Germany
[b] Leipzig Research Center for Early Child Development, Jahnallee 59, 04109 Leipzig, Germany
[c] University of Michigan, 300 North Ingalls Street, Ann Arbor, MI 48109, USA
[d] Duke University, 417 Chapel Dr., Durham, NC 27708, USA

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ABSTRACT

Children must learn not to trust everyone to avoid being taken advantage of. In the current study, 5- and 7-year-old children were paired with a partner whose incentives were either congruent (cooperative condition) or conflicting (competitive condition) with theirs. Children of both ages were more likely to mistrust information spontaneously provided by the competitive than the cooperative partner, showing a capacity for detecting contextual effects on incentives. However, a high proportion of children, even at age 7, initially trusted the competitive partner. After being misled once, almost all children mistrusted the partner on a second trial irrespective of the partner's incentives. These results demonstrate that while even school age children are mostly trusting, they are only beginning to spontaneously consider other's incentives when interpreting the truthfulness of their utterances. However, after receiving false information only once they immediately switch to an untrusting attitude.

1. Introduction

Children heavily depend on socially transmitted information (e.g. when learning what food to eat or to avoid, what rules to follow, which animals might be dangerous, etc.). By taking advice from others they acquire knowledge and skills they could never learn by relying on personal experiences alone (Henrich, 2015). It is therefore not surprising that young children have a strong tendency to trust information provided by others (Jaswal, Croft, Setia, & Cole, 2010). However, while conferring clear advantages in most cases, trusting other's advice blindly entails a risk – such information could be false or even intentionally deceptive. Children thus have to learn to be vigilant when interpreting other's utterances and identify individuals who are both willing and able to offer truthful information (Sperber et al., 2010).

Indeed, children are highly selective when deciding whom to trust. For instance, from age 3 children selectively trust previously accurate informants over inaccurate ones (Corriveau & Harris, 2009; Jaswal & Neely, 2006; Pasquini, Corriveau, Koenig, & Harris, 2007). Around the same age, they also start to preferably trust informants who previously adopted majority views than informants who dissented from a consensus (Corriveau, Fusaro, & Harris, 2009; Fusaro & Harris, 2008) and on whether past false statements of informants can be excused by situational factors, such as lack of perceptual access (Nurmsoo & Robinson, 2009a; but see Nurmsoo & Robinson, 2009b). While these studies show that children's abilities to evaluate informants' competence at providing truthful

* Corresponding author at: Jahnallee 59, 04109 Leipzig, Germany.
E-mail addresses: roman.stengelin@uni-leipzig.de (R. Stengelin), sgruenei@umich.edu (S. Grueneisen), michael.tomasello@duke.edu (M. Tomasello).

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information develop early only recently have studies started looking at whether children also consider others' intentions when deciding whether or not to trust their utterances.

How children deal with utterances provided by potentially dishonest informants is far from being fully understood. Informants may intentionally provide misleading information for several reasons. For instance, they may deceive others because they are mean by disposition. Accordingly, children have been shown to mistrust individuals who were introduced as being mean or who were labeled a liar and this tendency increases between age three to six (Mascaro & Sperber, 2009). Moreover, preschoolers tend to trust informants labeled as nice more than informants who they were told have relevant expertise indicating that others' alleged character dispositions play an important role in children's trust decisions (Landrum, Mills, & Johnston, 2013). Another source for inferring other's intentions is their prior behavior: Five-year-olds tend to mistrust hints by informants who they have previously seen showing positive affect when misleading others (Vanderbilt, Liu, & Heyman, 2011; Heyman, Sritanyaratana, & Vanderbilt, 2013). Observing an informant who is trying to trick others also decreases children's trust even if this information leads to positive outcomes (Liu, Vanderbilt, & Heyman, 2013). These studies thus indicate that between age 4 to 5, children already consider others' intentions when deciding whether or not to trust them (see also Shafto, Eaves, Navarro, & Perfors, 2012). However, 5- and 6-year-olds give greater weight to past accuracy than to observed intent (Liu et al., 2013) suggesting that children's abilities for intent-based trust are still somewhat fragile at this age.

Much less attention has been paid to another way of finding out about others' intentions, and as a consequence, their trustworthiness, namely, to consider their incentives in a given situation. The ability to do this is of particular importance since, when interacting with others in everyday life, we do not necessarily have clear information about their character dispositions or their past behaviors in similar situations. Individuals usually have to decide spontaneously and without prior warning whether or not to trust others. Deceivers tend to conceal their intentions, so that decisions on whether to trust informants often have to be inferred from the social context alone. For example, a salesperson may overstate the value of his/her goods in order to sell them at a high price and potential buyers have to be vigilant about the other's motives in order to avoid being tricked. We should thus preferentially trust others who have incentives for cooperation (i.e., incentives that are congruous with our own) compared to individuals who have incentives for competition (i.e., incentives that are in conflict with our own). To our knowledge, only two studies have addressed the question whether children consider an informant's intentions as a function of their incentives and without receiving prior information about the informant's disposition or past accuracy.

In one study, 3-9-year-olds were confronted with a "Sender-Receiver Game" in which children were asked to search for a hidden reward in one of two boxes (Sher, Koenig, & Rustichini, 2014). An adult experimenter (E1) who knew the location of the reward was asked by a second experimenter to provide a hint about its location. If children picked the correct box they could keep the reward and E1 received nothing. E1 only got the reward if children picked the wrong box such that providing truthful information was contradicting E1′s self-interest. Children's mistrust in E1′s hints increased with age. Around half of the 5-year-olds were initially skeptical and by age 7 almost all children chose the box opposite to the one indicated by E1.

In another study, 5-year-olds played a similar game with a puppet in which one player's task was to find a hidden reward while the other player could provide hints about its location (Reyes-Jaquez & Echols, 2015). In a first phase, children observed an experimenter hiding a reward under one of two boxes and children were asked to tell a naïve puppet where to look for it. In one condition, children won the reward if the puppet picked the wrong box so that children had an incentive to deceive the puppet. In another condition, players' interests were congruent so that both won a reward if the puppet searched in the correct location. In a second phase, the roles were switched: The puppet now observed the hiding event and provided a hint while children assumed the role of the guesser. Children mistrusted the puppet more if their interests were conflicting than when their interests were congruent suggesting that children took into account the situational incentives when deciding whether or not to trust her advice.

While these results are intriguing, children in the incongruent condition may have learned in the first part of the study that picking the opposite box as indicated by the informer is a successful strategy for the guesser. Indeed, participants' dishonesty in the first part and mistrust in the second part of the study were correlated (playing the role of the informant first also modified children's trust decisions in the study by Sher et al., 2014). Moreover, the informant's hints in these two studies were not provided spontaneously. Instead, they were part of the game instructions and participants were made fully aware that it was up to the informer to offer either correct or false information. This may have sensitized children to the possibility of being deceived. Hence, while these studies demonstrate that already late preschool children are able to consider other's incentives in some contexts it is not clear if they can do this spontaneously and in the absence of prior cues.

In the current study, we therefore aimed at presenting children with a scenario reflective of communication in everyday life in the sense that children had to decide whether to trust utterances which were provided entirely spontaneously. Moreover, children were not informed about the intentions of the informant and instead had to independently infer them from incentives alone. We were interested in whether and from what age on children mistrust hints by individuals whose incentives are directly opposed to their own compared to individuals whose incentives are congruent. In addition, we explored how children adjust their trust decisions in response to receiving misleading advice and if their interpretations of this advice depend on the informant's motives. For instance, wrong hints by agents with opposing incentives might be interpreted as intentionally deceptive leading children to mistrust that agent in the future, whereas the same advice by an agent with congruent incentives may be interpreted as an unintentional mistake. Alternatively, children may attach greater importance to outcomes of others' prior testimony than to their incentives resulting in mistrust towards an agent who had mislead them before regardless of the agent's incentives (Liu et al., 2013).

To address these issues, we presented young children with a ball-finding task. Participants were asked to search for a ball which was hidden in one of two boxes. A co-player who had visual access to the hiding event had either congruent or opposing incentives as the child. That is, the co-player benefitted either from the child's success or failure in the ball-finding task. At test, children were