



Study Summary and Results – October 2016

Creativity: Everyday, children are engaged in creating and consuming creative content of all kinds – from stories to songs, jokes and new ideas. Previous research from our own lab and others have shown that even by the preschool years, children are savvy about learning new facts – for example, they are more likely to learn facts from people who have been accurate before. But what do children know about subjective information? How might they decide what’s a good story or a worthwhile idea? In this study, we tested whether children aged 4 to 7 years old use uniqueness to judge whether a story is good, and how they evaluate the people who tell them. Using pre-recorded video clips and computer slides, we showed children pictures of two girls and a teacher; the teacher asked the two girls to either tell a story about some animals, or tell a fact about the animals, and the teacher would then give feedback about each fact or story. One girl always told stories that were brand new and unique, and one girl always told stories that other people have told before. After these demonstrations, we showed children pictures of strange, novel animals and asked them to pick which of the two girls they would want to tell them a new story or a new fact about the animal. Our results showed that children preferred to be told new stories about a novel animal by the girl who previously told unique stories, but did not prefer either girl to tell them a new fact. The majority of children also liked the girl who told unique stories more than the girl who told common stories. Our findings suggest that even by 4 years of age, children can not only track someone who made a unique contribution, but also use that to help guide their information seeking and evaluations later on.

Fluency: The ability to judge what information other people are likely to know is vital to successful communication and social interaction. The curse of knowledge is the tendency to be biased by one’s knowledge when attempting to reason about a more naïve perspective. The current study sought to determine the role fluency misattribution plays in the curse of knowledge bias in children. Fluency misattribution occurs when the subjective feeling of ‘fluency’ associated with familiar, or easy-to-process information gets misattributed when making various judgments. Applied to the curse of knowledge, fluency misattribution occurs when one’s feeling of fluency is misinterpreted as the information being objectively obvious or widespread. In the current within-subjects design 115 children aged four to seven were read stories involving two groups of animals, and were asked to judge whether their peers would know more about one group or the other. We tested fluency misattribution by manipulating the frequency with which participants heard about the animals. That is, children would hear about them frequently throughout or only once. The results revealed that increasing the frequency with which the information was presented lead children to over-attribute how common that knowledge was among their peers.

Peer Estimates: In this study, we tested children's ability to estimate how many of their peers would know different factual information. We were especially interested in testing how knowledge of unfamiliar information affects children's estimates of how widely known this information is among their peers. Four to 7-year-old children were presented with eight factual questions. Half of the questions were taught (e.g., The greater wax moth has the best hearing. How many children will know which animal has the best hearing), and the other half of the questions were not taught (e.g., How many children will know which insect or bug is the smallest?). After each question, children were instructed to show how many of their peers would know the answer on a board with five options: none, a couple, some, a lot, and a whole lot. Through this research, we found that when children learn unfamiliar answers to factual questions they tend to think that less of their peers will know the answers, compared to when they do not learn the answers. That is, when children realize the difficulty of the factual questions (by learning the unfamiliar information) they logically indicate that few of their peers would know the answers. These findings suggest that children are quite reasonable in considering the difficulty of a question and estimating how widely known the information is among peers.

The Curse of Knowledge and the False Belief Task: The false belief task is a well-established test that is used to evaluate one's ability to posit others' mental states. The curse of knowledge describes the phenomenon in which the ability to take a more naïve perspective is reduced when one has information others do not. This study aims to examine whether the curse of knowledge negatively impacts performance on the false belief task in children aged three to six years old. The participants were each presented with four false belief stories. All stories start off identically, with one puppet placing an object in a specified coloured box, leaving the scene, and another puppet moving the object from the original box to another box. In two of the stories, the participant knows ultimate location of the object (cursed condition) and in the other two stories, they do not know (non-cursed condition). The child is asked where the original puppet will look for the object. Preliminary data for this study shows that the curse of knowledge negatively affects performance on the false belief task in three and four year olds. In other words, when the child knows the final position of the object, they are "cursed" by the knowledge and will be more likely to incorrectly infer the first puppet's state of mind.