

THE SOCIAL COGNITION CHRONICLE

Greetings from the Social Cognition Lab!

We are happy to publish our very first newsletter for the parents, school directors, and teachers who have helped us with our research! Under the direction of Dr. Jonathan Lane, the Social Cognition Lab at Vanderbilt University's Peabody College celebrated its two-year anniversary in July 2017. Our research is focused on children's social cognition—how they learn from people and about people—as well as their understanding of and belief in the counterintuitive and counter-perceptual. Dr. Lane began his work as an Assistant Professor at Vanderbilt University in 2015 and is very excited to have the opportunity to continue working with the Nashville community in the coming years! Read on for an overview of some of our current work and preliminary findings.

Invisible Entities

Children are taught and hear about a range of unobservable entities that play important roles in how we understand our world (Lane & Harris, 2014). Examples of these entities include germs, oxygen, atoms, and Wi-Fi signals. According to previous research, by 3 years children understand some aspects of invisibility. They understand that some entities can transform from being visible to being invisible and can still produce a noticeable effect; for example, sugar can be dissolved in water and make the water sweet (Rosen & Rozin, 1993). At this age children also understand that familiar, visible entities can produce familiar, observable outcomes via invisible forces; for example, that fans can generate wind to blow out candles (Shultz, 1982).

What do we want to learn?

In these studies, we are interested in whether children, when they are first taught about the causal power of a new invisible entity, grasp the connection between the entity and the resulting outcome. We were



also interested in whether children assume that invisible entities exist based solely on their visible outcomes.

In one study (Lane & Shafto, 2017), children were taught about an invisible substance that, when placed on a special box, makes the box turn blue. Then, children were shown two identical containers that appeared empty. The researcher inserted a spoon in one container, turned the spoon upside-down above the box, which turned blue. The same procedure was performed for the other container and spoon, and the box did not light up. Children were asked whether each container had stuff inside. Findings revealed



that children as young as 2-years assumed that an invisible substance was present only when the box turned blue.

We next examined what would happen if children were not taught about the invisible substance, and only saw the sequences with the containers, spoons, and box. Would children *spontaneously assume* that an invisible entity caused the box to turn blue? We also assessed whether children could *use* the entities to make the box turn blue.

The study revealed that by 3-years children spontaneously assumed that invisible entities were present to account for the box turning blue. Further, by 4 years, children used their knowledge of the invisible entity's powers to make the box turn blue – when asked to make the box turn blue, they often chose to place a cotton ball 'soaked' with the invisible substance on top of the box.

The Social Cognition Lab

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Invisible Entities:

Current Study

In a current study, we are exploring children's understanding of extraordinary properties of invisible entities, such as the ability for certain entities to rise (like helium) or to pass through barriers (like WiFi signals). Using similar procedures as in the previous studies, children are shown clear containers that appear to be empty. Both containers are manipulated (for example, the experimenter inverts a container above a special box, with a plastic barrier between the container and box) and for one container the box changes colors (for another container, the box does not change colors). Children are then asked whether anything is inside each container.



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Learning about Social Groups

From a young age, children use multiple cues to form attitudes about social groups; for example, whether or not the groups have similar food preferences, attire, accents, and appearances. In some cases, children might form these attitudes on their own, without having to receive explicit messages from others. However, in other cases, children are likely developing certain attitudes about social groups based on information provided by other people, including peers and adults. So far, very little experimental research has examined how these messages influence children's beliefs about and attitudes toward new social groups.

What do we want to learn?

One of the main goals of this research is to examine whether and how children form opinions about a new group based on what they hear others say. Another goal is to examine whether children must be directly taught this information, or whether children can obtain this information by merely listening-in on others' conversations.

In the first study, children ages 4-8 years played a game with a researcher who provided negative messages about a new (nonexistent) social group. The messages were either provided directly (the experimenter faced and looked at the child) or indirectly (the experimenter spoke to someone on the phone and faced away from the child).



After hearing the messages, the researcher left the room. Then, another researcher asked children to evaluate the new social group and to draw a picture of someone from that group next to a drawing of themselves.

So far, the results reveal that messages that were provided directly to children (as opposed to overheard) were especially influential in shaping children's attitudes about the new group, as demonstrated in their verbal responses and drawings. The oldest children's (7-8 year-olds') attitudes were most influenced by these messages.

Social Groups: Current Study

In a new study, we are exploring whether the influence of messages about social groups depends on who provides the information – other children or adults. Children play a picture-finding game with a researcher, during which the researcher receives a Skype call on her computer (it's actually a pre-recorded video). The Skype call is from a child or from an adult, and during the call they provide messages about a novel social group. After the call, the researcher asks children about the group. As in the previous studies, we are exploring how these messages influence children's attitudes about the new group and how this differs across development.



**On behalf of Dr. Lane and all of
the researchers at the Social
Cognition Lab:**



We greatly appreciate the help of
all of the children, parents, schools,
and teachers who have
participated in our studies! We
couldn't do this work without you!

INTERESTED IN PARTICIPATING AGAIN?

We would love for you and your
child to visit for another study, or
to bring our research team to
your students' school! We have
new studies every semester, so
feel free to contact the lab to
inquire if we have any that your
children qualify for!

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