cent example. King and his team appointed themselves the project managers, enabling participating outlets such as The Nation, The Chicago Reporter, and Ms. to release similar stories on a previously agreed upon topic, like taxes, during one particular week. The outlets also agreed not to run stories on the topic during the subsequent week, to allow the researchers to study shifts in public conversation.

King’s team also took special care to ensure that the experiments were conducted during relatively calm news weeks when the public’s attention wouldn’t be dominated by new legislation, a major election, or political scandal. Their results showed a 62.7 percent increase in Twitter conversations about a policy area in the week when outlets agreed to write about that issue. Furthermore, when an outlet expressed an opinion on a given topic (favoring the new tax plan, for example), public opinion shifted by 2.3 percent in the direction of the view expressed in the article.

The study’s results show that journalists also wield significant power in what King calls “setting the agenda” for national conversation across party lines. “If an outlet publishes a piece about abortion but calls it ‘reproductive rights,’ then both Republicans and Democrats are going to be calling that issue ‘reproductive rights’ in their discussions on Twitter—the outlet has determined how we refer to an issue.” This is true, he adds, even though those Twitter conversations will likely be occurring within communities known as “filter bubbles,” which form because people elect to follow those who share similar ideological views on social-media platforms.

One of the most significant implications of the team’s findings, King believes, is the potential to embolden some news outlets to reach two different objects. The character eyes each object up and down, making a cooing “mmm” noise of acknowledgement. In the first experiment, the character must choose which one to approach. When the character chose the object that had previously required less effort to reach, the babies looked at the screen longer. In some trials, the character glances at the object that’s hardest to reach but refuses to visit it because of the perceived barrier.

Then the babies were shown a new scene in which the character is faced with a choice. Standing equidistant between two objects it had visited previously—a yellow triangle and a blue square, for example—the character must choose either one to approach. When the character chose the object that had previously required less effort to reach, the babies looked at the screen longer. The team says this shows babies were surprised by choices of objects that

toward activism. For example, a journalist who feels that the pollutants being released into the atmosphere aren't receiving sufficient attention could choose to cover climate change in order to increase discussion about the topic. The journalist may also espouse an opinion about companies that refuse to divest (in order to influence public opinion) and refer to the issue as “climate danger,” thereby pointing the agenda in the desired direction. Such power, King says, also comes with great responsibility. “Our research shows that one journalist can really shape the national conversation, which is why it’s so important that journalists adhere to strict ethical standards. If just one person skimps on those ethics, it can really have a noticeable impact.” —OSET BĂBŬR

**The Emergent Mind**

**What goes on in the minds of babies?** A lot, it turns out: long gone are the days when psychologists believed infants couldn’t use abstract thought. Recent research from the lab of Elizabeth Spelke, Berkman professor of psychology, suggests that babies can understand things about social behavior, preferences—even about people’s objectives and values. According to a new paper in *Science* coauthored by psychology Ph.D. candidate Shari Liu, Spelke, and colleagues at MIT, infants seem to infer how much people value different goals based on how hard adults are willing to work to attain them. The research sheds light not just on the developing infant mind, but on the fundamental process that allows humans to learn and reason.

The study relied on a set of three cleverly designed experiments that use the length of time babies spend looking at an object to make inferences about their cognition. Ten-month-old babies were shown a series of animated videos where the main character—a smiley, bright-red sphere—must move through physical barriers of varying difficulty

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In videos screened for babies in the lab of Elizabeth Spelke, the red spherical character must jump over a wall (top) or climb a hill (bottom) to reach its goal.

had previously required less effort to attain, and further argues that this suggests infants have an innate understanding of cost and value: they expect that goals people work harder to reach must be valued more, and expect actors to choose the highly valued, hardest to reach reward. “The most parsimonious interpretation of the findings,” Spelke says, “is that babies are understanding the events in all three experiments in accord with the same abstract variables of cost and value, and they’re using the different physics of the situations to infer the different costs of the actions.”

“Of course, that’s a very simple inference,” she continues. “It’s a basic tenet of utility theory, and yet it depends on two highly abstract variables: cost and value. We now have evidence infants are understanding the actions they’re seeing in fundamentally the same kind of way.” The key to the experiments was designing scenarios that were identical in every way except in the size of the barrier between the character and his goal objects: “What we tried to do in this study was set up a situation where if the babies were just interested in physical actions, and not so much in abstract variables that could underlie whole patterns of motivated behavior, they wouldn’t know what to make of the events they were seeing.”

“Preferential looking” or “looking-time” studies were developed in the 1950s, as a way of asking basic questions about how the world looks to babies: can they see color, patterns, and depth? “You could show that blue and green look different to babies by presenting something blue again and again, until the looking time went down, and then show them an alteration, like green, and then you would see looking time going up,” Spelke explains. “That was the first evidence that babies would attend to change.”

In the intervening decades, looking-time studies have expanded beyond visual acuity to more difficult questions about babies’ capacities for abstract thinking. “These are the basic, building-block methods that we and many people have gone on to use to ask, not ‘What does the world look like to infants?’ but, ‘What do they understand about the world?’” Spelke explains. In the 1980s and ‘90s, her experimental work showed that babies look longer at objects that seem to defy physical laws by, for example, appearing to move through an obstruction. That might sound trivial to an adult mind—but it suggests that infants aren’t blank slates born without...
What do Darwin’s finches and cichlid fish have in common? Both animals provide intense parental care, which appears to influence their offspring’s mating preferences later in life. In recent decades, scientists have proposed this “sexual imprinting” as one of the main mechanisms that drive explosive speciation within these groups: rapid branching in the tree of life. Sexual imprinting has been observed in 15 orders of birds, some fish, and a few mammals. Now two species of deer mice (the most abundant mammal in North America) can be added to the list, according to a new paper in Evolution by Emily K. Delaney, Ph.D. ’14, and Hopi Hoekstra, Agassiz professor of zoology: the white-footed mouse (Peromyscus leucopus), and the cotton mouse (Peromyscus gossypinus). Known to produce viable hybrid offspring, these “sister species” have genetic markers suggesting that they diverged relatively recently—they’re at what Hoekstra calls the “sweet spot” for scientists interested in speciation.

While working in Hoekstra’s lab, Delaney (now an evolutionary geneticist at the University of California, Davis) planned to study a natural population of hybrids in the field, thinking she might examine the pheromones involved in mating. But the best-laid schemes of scientists often go awry: out of 316 wild mice that she collected and ran through genetic analysis, only 5 potentially fit the profile for hybrids. She therefore switched the focus of her project. The two species mate successfully in the lab—so why not in nature, when they’re running around in the same plot of woods?

To find out, she raised some mouse pups normally—weaned from their parents 23 days after birth and separated into same-sex cages. Other newborn litters were swapped into nests of nursing females of the opposing species. When it came time to test all the newly mature adults’ sexual preferences, she tried to make courtship conditions as natural as possible. Generally, past rodent mate-choice studies tethered the two “stimuli”—one mouse from each species—at either end of a Y-shaped chamber, with a third “chooser” mouse in the middle, but Delaney explains that this set-up tended to stress the mice out. She “needed something that would allow the mice to physically interact, but that would still contain the two stimuli mice.” So she devised an apparatus she privately nicknamed “the love box”: three chambers, with the male or female chooser in the middle and a suitor off in each wing, separated by gates pre-programmed to let only the chooser move freely. This allowed a wider range of interactions between chooser and candidates: fighting, chasing, nesting, copulation—all of it recorded on video.