

# Questionnaire

## Awakening the child inside

Developmental psychologist Alison Gopnik says that in some ways, babies may be smarter, more thoughtful and more conscious than adults.

BY AMY NOVOTNEY

Until recently, the idea that babies and young children could empathize with other human beings seemed outrageous to most philosophers and psychologists. For years, developmental psychologists Jean Piaget and Lawrence Kohlberg argued that we really don't even fully understand the concept of morality until adolescence — or even later.

But over the past two decades, research by University of California at Berkeley psychologist Alison Gopnik, PhD, suggests that very young children can and do understand the perspectives of others, and that their thinking about other people changes as they learn more about the world and themselves.

Her findings — and those of other developmental psychologists — have led researchers to rethink previous assumptions about the minds of babies and young children. In fact, says Gopnik, author of "The Philosophical Baby" (Picador, 2009), harnessing the thinking behind such irrationalities as a 3-year-old's wild make-believe may help adults write novels, invent new technologies and plan for a better future.

### What convinced you that babies' minds have been misperceived?

It's a whole line of research by many psychologists, but let me give you just one example. Traditionally, psychologists thought that children could only take

the perspective of another person when they were 7 or so. About 10 years ago, I conducted what Betty Repacholi, PhD, and I called the broccoli-goldfish study, one of the first studies on what infants understand about other people's minds. We gave 14- and 18-month-olds bowls of raw broccoli and Pepperidge Farm goldfish crackers and had them try some of each. They all liked the crackers more than the broccoli (even in Berkeley!). Then we had an experimenter take a bit of food from each bowl and make either a disgusted face or a happy face. Sometimes what they did matched what the babies did, but half the time the experimenters showed the opposite pattern — they liked the broccoli and disliked the crackers. We found that next, when the experimenter would put her hand out to the baby and ask for some, the 18-month-old babies would give her the thing that the experimenter liked, rather than the thing that the baby liked. In a very simple way, these children were already doing something that's actually hard even for grownups: recognizing that someone else has a different perspective and taking that perspective into account when you decide how to deal with them. Broccoli vs. goldfish isn't blue state vs. red state, but it's still a pretty big difference in perspective.

### How are babies able to learn so much about the world from such small everyday interactions?

If you think about it from an

evolutionary perspective, one of the great psychological mysteries is why we have childhood at all. Why do we have this long period when human beings are completely helpless and immature and where we have to put so much energy into taking care of them?

The evolutionary story seems to be that we need that protective period of immaturity to learn all the things that we need to about the world around us. So we could think about babies and young children as literally being designed to learn. That's the reason why they exist as babies and young children, and that's part of why they're so helpless. But that also means that babies and young children should be equipped with powerful learning mechanisms, and, in fact, we've discovered they are able to learn from statistics and experiments much as scientists do.

### So what can we, as adults, learn from babies?

We can learn how to be more open to new ideas. There seems to be this intrinsic tradeoff between the kind of intelligence you need to effectively interact with the world, and the kind of intelligence you need to be able to learn very quickly and effectively about new things. For good reason, grownups are focused on actually making things happen and getting things done, so we tend to have a somewhat narrow, focused view. We focus in on one thing and weed out everything else.

Babies and young children have a very different way of interacting with the world. They're much worse at focusing on just one thing and better at paying attention to new or unexpected things. It may be that not being so good at planning or executive function actually gives them an advantage when it comes to creativity and discovery. There are times — for instance, when you're trying to brainstorm or break out of a rut — when it's very helpful to put yourself in that baby mode of being open to lots of possibilities and not being so focused on the thing that you need to do next.

One of the things I think is fantastic about having babies and young children is that it's simultaneously the most significant adult, responsible thing we do in our entire lives, but it also gives us a chance to experience the world through the eyes of a young child. Think about going to the 7-Eleven to get milk. If you do that with a 2-year-old, it's going to take about five times as long, but you'll realize that the two blocks to the 7-Eleven is full of swinging gates and pizza fliers and dogs and all of this rich, exciting stuff that we as adults learn to edit out. Children can teach us that, if we really want to learn about the world, we need to maybe not focus in quite as much and open ourselves up to new possibilities.

### **Where do psychologists go from here?**

One of the things we've learned is that children are reasoning in a way that's as sophisticated as even very sophisticated scientists. In the last 10 years, we've shown the computations, including Bayesian inferences and the construction of probabilistic models, that underlie that learning, but we don't know exactly

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what the processes are that are going on in children's minds and brains that enable them to do those computations, so that's one area that I think is very much still a new frontier.

Another idea is this concept of

whether children are actually smarter than adults or older children in some ways. One thought is that maybe children learn so much just because they don't know very much to begin with, and the more they know, the more

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what they know already shapes what they think about the world. Another possibility is that there’s just something about children’s minds and brains that intrinsically makes them more open and better at learning, and it would be really interesting to find out what it is about the way their minds work that makes them so smart.

You often hear neuroscientists compare a baby’s brain to that of a chimpanzee or people with brain damage, and it’s as if there’s this implicit model that babies are basically defective grownups. I think we’re going to find just the opposite — that in some ways, on some dimensions, babies are actually super grown-ups. They’re better at doing some things than we are. If that’s true, it will be really interesting to figure out the dimensions in which babies are better, and what it is about their minds and brains that make them smarter. I hope that can help us respect just how much the everyday things that babies are doing are teaching them about what’s going on around them.

## How has having your own children influenced your research?

When I arrived at Berkeley as an assistant professor, I had three children under age 10. Certainly looking at them and seeing all the things they said and

did helped in my research. In fact, what inspired that broccoli and goldfish study was that when my youngest son was about 2, we had pineapple in kirsch for dessert. He had a taste of it and made this terrible face. Then for weeks afterward, completely out of the blue, he would turn to me and say, “Mommy, pineapple is yummy for you, but it’s yucky for me,” and I thought to myself, “Hmm, when it comes to dessert, this 2-year-old is showing a very sophisticated understanding. I wonder if there’s some way we can turn this into an experiment?”

## What are the three things you want every parent to know about their child’s development?

The first thing is that kids are much, much smarter than you think. They’re figuring out everything that is going on around them.

The second thing is that you might conclude that this means you have to turn on Baby Einstein videos and flashcards and put preschoolers in academic kindergartens, and I think the moral is exactly the opposite. Parents should appreciate that babies and young children are incredibly smart, but the way that their intelligence expresses itself is through their everyday exploration and interactions with the people around them and with everyday objects, not through

being in structured classes or having explicit pedagogical kinds of teaching.

The third thing, which is not just for parents but for everybody in society, is that we really need to support that early learning and discovery. We spend an enormous amount of money on educating people age 18 to 25, but until recently, we spent basically nothing on children age 0 to 5. What we’ve discovered is that children are learning more in that time than they ever will again.

That doesn’t mean that we should be putting babies in school, but it does mean that we should be supporting the parents and caregivers who are taking care of them. In fact, we do just the opposite — we pay parents nothing, we pay caregivers almost nothing. That’s something that I think really has to change.

## How can society help change that?

One way is to institute better parental leave policies, the way they do in Europe, where parents can have a year of paid time off with the understanding that it’s not like they’re sitting around and doing nothing. That’s a time when they’re doing extremely important work.

We also need to provide first-class, well-supported and well-funded early childhood programs so parents aren’t in a situation where they have to struggle to send their child to a good child care program, and open more preschools with well-supported, stable teachers and a rich environment with lots of room to play. We know how to do it; it’s just a matter of having the will and the finances to make sure it’s made available to all children in the United States and the world. ■

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