REVIEW ESSAY

Learning as a Child in Gopnik's *The Philosophical Baby*

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In the book *The Philosophical Baby: What Children's Minds Tell Us About Truth, Love, and the Meaning of Life*, author Alison Gopnik recounts how fellow developmental psychologist John Flavell mused about giving up all his hard-earned academic degrees and achievements in exchange for just five minutes inside the head of a two-year-old. This in a sense is a vivid description of Gopnik's goal in her ambitious book. Here she explores the mind of the child by integrating philosophical questioning about the mind with the empirical discoveries of developmental psychology (having academic backgrounds in both disciplines), all this while skirting around dry and stuffy academic language in favor of a more relaxed yet lucid prose that makes her writing accessible to a wider audience. And quite an achievement it was.

The book made it to major bestseller lists as well as a couple of recommended reading and editors' choice lists—a rare and

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remarkable accomplishment for an academic, or indeed for any philosopher, alive today. One can perhaps say that it is one of the most successful books of philosophy published in the last decade (if measured solely in terms of audience reach and popularity for I cannot vouch for its success as a book in developmental psychology). The book can be seen as a kind of billboard advertising some of the most pivotal insights and discoveries made by academics on the study of the human mind in general and the child's mind in particular. The book's importance then lies in the fact that it aims to transmit to the wider public key and vital knowledge which warrants *prima facie* acceptance on the grounds that it is reported by a proper authority and expert on the subject. Given these considerations the book deserves a closer look and in this extended review I examine some of its major claims about the mind of the child and will see if it stands up to philosophical scrutiny.

Gopnik does not shy away from making bold and contentious claims in her book. Some of these claims include the almost paradoxical role of uninhibited imagination and exploring make-believe worlds (and having make-believe friends) in the child's learning and acquiring knowledge about the actual world (and other actual people), the child's natural capacity for empathy as well as his/her surprisingly speedy developing understanding of basic moral concepts (such as harm and fairness which disputes earlier views of children as selfish and egocentric), as well as the sense of self that allegedly emerges rather slowly and only later on in the young child's development. In this review however I shall focus on two of what I think are her most intriguing conclusions about the child's mind: (1) children learn about the world in

much the same way as scientists do when they construct elaborate explanatory and predictive theories and (2) children are actually "more conscious" than adults.

The Child as Scientist

According to Gopnik, children are unconsciously some of the most rational creatures. Unlike us adults, much of the world around them is new or unexplored. It is only natural for them to be unremittingly curious and fascinated. So how do they go about exploring and learning about all these things? What is the underlying learning mechanism that facilitates the acquisition of vast amounts of knowledge about the world?

Gopnik suggests that children develop causal theories of the world in almost the same manner that scientists do insofar as it helps in making predictions, explaining events, inferring what can be possible and impossible in given situations and circumstances, as well as revising theories in light of recalcitrant evidence.[1] Gopnik has long explored the parallels and connections between scientific reasoning and developmental psychology[2] and this is definitely an extension of this exploration. She claims that just as in the sciences children also construct psychological, biological, and physical theories. Crucially, she makes a caveat that these theories are "largely unconscious rather than conscious, and they are coded in children's brains, instead of being written down on paper or presented at scientific conferences."[3] These causal

[1] Alison Gopnik, *The Philosophical Baby: What Children's Minds Tell Us About Truth, Love, and the Meaning of Life* (New York: Farrar, Straus & Giroux, 2009), 37–38.

[2] Alison Gopnik, "The Scientist as Child," *Philosophy of Science* 63 (1996): 485–514.

[3] Gopnik, *The Philosophical Baby*, 38–39.

theories are said to work like internal mental maps which aim to provide the child with an accurate cognitive representation of the world and how it works. Gopnik claims that cognitive maps in general are also constructed by other animals such as rats who can easily navigate a maze after exploring all its nooks and crannies. However, these maps made in rat minds are mostly just spatial maps. Rats are not capable of constructing causal maps, at least not in the elaborate, full-blown way that we humans do.[4] Mere stimulus-response learning is certainly very different from constructing theories which may also involve making sophisticated counterfactual inferences (basically judging possible outcomes arising from different scenarios and circumstances) and recognizing statistical patterns.

Understanding other people is a more specialized kind of understanding that is allegedly unique to us humans. It is often pointed out that we humans have a fairly sophisticated capacity for social cognition; that we can have a robust and fine-grained understanding of the psychological perspectives of others. Gopnik suggests that a similar cognitive mechanism is at work here; that children construct a so-called "theory of mind," a psychological causal map which allows them to make predictions, explanations, and counterfactual inferences about their own mental states as well as the mental states of others. According to Gopnik:

> One of the central tenets of this theory of mind is that people may have different beliefs, perceptions, emotions, and desires and that those differences may

[4] Ibid., 41–42.

> lead to different actions. People behave differently because they have different kinds of minds.[5]

This sort of theoretical understanding of the causal interaction between various mental states is often portrayed as "mindreading." Acquiring knowledge of this kind equips children with the skills necessary to navigate the complex social environment of human beings. Some of these skills include detecting how others can possess false beliefs, coming up with claims that aim to deceive other people, as well as being able to exert "executive control" over their own thoughts, actions, and emotions.[6]

In A. C. Grayling's[7] review of Gopnik's book he recognizes a familiar worry of "reading-in" and making interpretations and attributions that may have gone a little too far in attempts at understanding what is going on inside the child's mind.[8] On this regard I concur that Gopnik was perhaps a bit indulgent. One can't help but wonder if Gopnik as a scientist is interpreting a general capacity to encounter the world in the ways in which she is most familiar with, namely from the viewpoint of a scientist. This is not necessarily wrong but at the same time this kind of intellectualizing impulse may blind us to other interesting and productive ways of understanding the child. A theoretical and thoroughly reflective and objective scientific attitude of encountering the world is only one way of encountering the

[5] Ibid., 55.

[6] Ibid., 58–59.

[7] A. C. Grayling, "Reviews & Essays: The Philosophical Baby," *Barnes and Noble*, 27 July 2009, https://www.barnesandnoble.com/review/the-philosophical-baby-2.

[8] See Marshall M. Haith for a more detailed discussion. "Who Put the Cog in Infant Cognition? Is Rich Interpretation Too Costly?", *Infant Behavior and Development* 21 (1998): 167–179.

world. Another way is of course the more practical, more engaged mode of encountering the world. In Heideggerian parlance we encounter the world not just as present-at-hand but also more fundamentally as ready-to-hand.

In comparing children and scientists Gopnik is also careful to point out crucial dissimilarities. However, sometimes the dis-analogies are simply too hard to ignore and perhaps substantive enough to render the comparison questionable. For instance, as mentioned earlier, Gopnik claims that this type of learning in the child is largely unconscious; rather than appearing in the reflective consciousness of the child. This theoretical representational reconstruction of the world occurs "offline" as it were, deep in the subconscious mind of the child. But aren't scientific theories the way they are because of a very careful, reflective, and deliberate process of conscious thought? We do form causal-explanatory judgments about the world as a matter of course in our everyday lives and that these often are quick and automatic rather than careful and reflective judgments. But this precisely marks a big difference. Much of our quick and automatic judgments of this kind are simply the result of our everyday abductive explanatory practices, say when we step out of an enclosed building and find the street wet and subsequently conclude that it must have just rained. This may be sound judgment but to say that these judgments qualify as scientific seems to stretch it a bit too far in part because it lacks the theoretical systematicity and even the methodological reflexivity that scientific judgments often aim for.

Gopnik relates a finding in which children often explain biological events and processes in terms of some kind of vitalist life force. This seems like a fairly sophisticated and systematic

explanation but it also seems to flout other critical criteria (such as precision, parsimony, falsifiability) for judging whether a claim is truly scientific. These reflections on how we make scientific judgments show how careful, reflective, and deliberate conscious judgment is in a way central (though perhaps unacknowledged) in making scientific theories the way they are. If this is true then comparing the supposedly unconscious learning process in the child with the thoroughly reflective (let alone social) practice of scientific theorizing may seem like an overreach and over-attribution.

Perhaps this unconscious learning process simply mirrors our everyday abductive explanatory practices rather than our scientific practices. That said, further questions abound with this picture of learning Gopnik presents us. It may be possible that we are unconsciously constructing cognitive "maps" of our surroundings just as rats do in navigating a maze. However, one can do away with a heavily representationalist view and instead explain how we get around in terms of perceptual affordances. The "mapping" metaphor is also one that is criticized for neglecting the social-cultural dimensions of learning.[9] Moreover, Gopnik clearly stakes her claim on a "theory theory" approach to social cognition that makes largely unconscious theories about other people's beliefs, desires, and other mental states. But this is not the only known approach. There is also simulation theory[10] and,

[9] See Michael Tomasello, "Can We Please Lose the Mapping Metaphor, Please?", *Behavioral and Brain Sciences* 24 (2001): 1119–1120.

[10] Alvin I. Goldman, "Simulation Theory and Mental Concepts," In *Simulation and Knowledge of Action*, eds. J. Dokic and J. Proust (Amsterdam: John Benjamins, 2002), 1–19.

the one that I am partial to, interaction theory.[11] Interaction theory for example explicitly rejects the mentalizing, intellectualizing, and individualist tendencies of the other two approaches. These tendencies are few of the remaining remnants of the Cartesian picture of cognition. Taking its cue from insights in the phenomenological tradition, interaction theory favors a primary intersubjective and embodied perceptual attunement in our engagement with others.

One of the strong attractions of interaction theory in my view, is how it naturally and easily accommodates our common experience and practice of relating and communicating with others. It does not rely on a third-personal observational stance in theorizing about social cognition. Instead it emphasizes a more second-personal intersubjective stance which is more engaged, relational, and participatory in nature. The view of social cognition Gopnik presents in her book still relies heavily on the Cartesian picture with its overly intellectualist and individualist notion of understanding and encountering the world. But infants do not necessarily start out as isolated subjects whose cognitive access to the world is by way of making unconscious accurate maps or representations of it. Infants already have a primary access to the world through others, mostly their mothers. Infants are already immersed in a world of intersubjectivity from the very start. This sensitivity to the primordial intersubjective life of the young child, in my view, makes interaction theory compelling and

[11] Shaun Gallagher and Daniel D. Hutto, "Understanding Others Through Primary Interaction and Narrative Practice," In *The Shared Mind: Perspectives on Intersubjectivity*, eds. J. Zlatev, T. P. Racine, C. Sinha and E. Itkone (Amsterdam: John Benjamins, 2008).

the "theory theory" approach, mentioned above, problematic and implausible. It is not that Gopnik does not recognize the importance and value of parent-child relationships, she of course does. It is more that her commitments may prevent her from seeing the deeper ontological and epistemological implications of this kind of relationship.

What It Is Like to Be a Child

One of the most fascinating chapters in Gopnik's book is her chapter on infant consciousness. The chapter is a speculative exploration of what it is like to be an infant and young child. But ever the dutiful scientist, Gopnik tries to ground her claims on empirical evidence. She does this by pointing us to empirical work on attention. Attention according to her is often portrayed by psychologists as something like a spotlight.[12] Paying attention works by directing our conscious awareness at particular features of the environment within our perceptual reach. But there are of course different ways by which our conscious awareness is directed. Gopnik remarks on the distinction between endogenous and exogenous attention.[13] Attention that is goal-oriented, narrowly focused, and voluntarily controlled is called endogenous attention while attention that is less focused and is usually directed by outside stimuli is called exogenous attention. Gopnik notes that "[f]or babies, attention is much more likely to be captured by interesting external events than directed by internal plans and goals . . . Endogenous attention seems to develop quite slowly all

[12] Gopnik, *The Philosophical Baby*, 110.
[13] Ibid., 111.

the way through the preschool years."[14] This fact, that children get easily distracted all the time, should be quite obvious to anyone who has ever been around a child.

So how then do children learn more about the world when their attention is mostly scattered and aimless? Gopnik thinks that this is a matter of an "evolutionary division of labor" between children and adults.[15] For adults what is important is pursuing certain ends and purposes in which a more focused, goal-oriented attention directed at useful and relevant aspects of the environment is certainly conducive. For the child however the evolutionary imperative is to "learn as much as they can as quickly as possible."[16] What's more important for children is for them to construct an accurate causal map of their surroundings which provides the impetus and motivation for a more wide-spanning conscious awareness of the world around them. In neurological terms exogenous attention helps in making more and more neural connections in the brain while endogenous attention is concerned with pruning the less significant connections and retaining the ones more relevant to one's plans and goals.[17] Indeed, this wide-viewed, panoptic form of attention is perhaps most conducive to a more exploratory form of conscious experience that is ostensibly available to the child. So while children's attention is more uninhibited, this lack of inhibition allows them to take in more information about their surrounding environment thus facilitating more learning.

[14] Ibid., 117.
[15] Ibid., 123.
[16] Ibid.
[17] Ibid., 122.

Given the vast difference in attentional capacities between children and adults, what is it like then to have this kind of childlike conscious awareness? Gopnik offers us a rather "illuminating" analogical picture:

> It's plausible that babies are actually aware of much more, much more intensely, than we are. The attentional spotlight in adults seems more like an attentional lantern for babies. Instead of experiencing a single aspect of their world and shutting down everything else, they seem to be vividly experiencing everything at once . . . While they inhibit distractions less well, more of the field of consciousness will be available to them. This also suggests that they are *more conscious* than we are.[18]

Gopnik thinks that children's attention is far richer since it can take in more features available in their immediate perceptual environment. She helpfully compares this childlike conscious experience with our more familiar experience of travelling and exploring an exotic country. Everything is new to us so our experience of the place is supposedly more intense and vivid. Gopnik seems to be implying in this analogy a close connection between novel experiences and wider attention; that exogenous forms of attention can assist in detecting and taking in more new information about a world that is foreign and unfamiliar to us. However, one can think that a child can easily familiarize herself with the contours of her own room for instance but that does not

[18] Ibid., 125, emphasis mine.

automatically make her attention more endogenous. The child can arguably be just as distractible in her own room as she is easily distractible in a foreign country. So this wide-spanning, panoptic attention exhibited by the child (if divorced from having novel experiences) does not entail having an intense and vivid experience. It is one thing to say that an experience is intense and vivid because it is novel (like in the travel analogy) and another thing to say that it is intense and vivid because we are aware of much more of it. I am not so sure about the latter. Novel experiences can for sure be rich and exciting but simply having a wide-spanning attention does not necessarily evoke these same feelings. Speculating that the child's experience is more intense and vivid (and therefore more conscious) just because it is aware of much more falls a little flat. A narrow and focused conscious awareness can be just as intense and vivid if not more so.

Curiously absent in Gopnik's discussion of child attention is the phenomenon of joint attention. This I think is a massive oversight since first, it can be argued that a large swathe of knowledge the child acquires about the world she obtains through joint attention (and not merely by attending to things on her own); and second, joint attention offers a more plausible picture of learning that seems more in line with our highly interactive and social nature. Joint attention precisely provides the opportunity for the child to learn about the world with the helpful attentional nudge of an adult caregiver. In fact it has been demonstrated that just one instance of active ostensive-communicative signaling from an adult (in contrast with a mere passive observation on the part of the child)

facilitates learning of general concepts.[19] Gopnik's discussion of attention thus again suffers the same weaknesses as her accounts of social cognition and learning in general. It is too individualistic an account of attention and fails to consider the interactive and socially significant ways in which attention is deployed by the young child. To be fair, I should point out that Gopnik also recognizes the important ways in which we learn from others but this is once again explained from a third-personal, observational standpoint and hence still lies well within the Cartesian picture. It is one thing to pay due attention to our intensely social nature as a species but it is quite another thing to seriously consider the deeper implications of this intense sociality in our ways of encountering and experiencing the world.

This leads us back to my earlier discussion of interaction theory and intersubjectivity in the infant. The capacity of the child to engage in joint attention is a further development of the primary intersubjective access that is clearly evident very early in the child's life. The child psychologist Colwyn Trevarthen makes a helpful distinction between primary and secondary intersubjectivity. Primary intersubjectivity concerns strictly dyadic face-to-face interactions between a prelinguistic child and her caregiver while secondary intersubjectivity widens that interaction to involve reference to objects and events in the environment.[20] Joint attention is an instance of secondary intersubjectivity which occurs

[19] György Gergely and Gergely Csibra, "Natural Pedagogy," *Trends in Cognitive Sciences* 13 (2009): 148–153.

[20] Colwyn Trevarthen, "The Self Born in Intersubjectivity," In *The Perceived Self: Ecological and Interpersonal Sources of Self-Knowledge*, ed. U. Neisser (Cambridge: Cambridge University Press, 1993), 121–173.

later than primary intersubjectivity. From a primary interactive and relational awareness with one's caregiver, this socially coordinated form of attention expands to the wider world around the child and heavily informs her learning of that world. [21] The interpersonal and interactive manner in which attention develops in the child may even lead us toward novel accounts of human conscious experiences that seriously take its rich intersubjective dimension, often overlooked in standard accounts.

Despite my serious objections to some of Gopnik's claims about the mind of the child, this book in my opinion, is still worth a look. It offers a highly informative and highly accessible overview of some important empirical work in developmental psychology, neuroscience, and related disciplines straight from an authoritative voice. At the same time it gives us a glimpse of how this kind of empirical sensitivity can lead to novel insights in a host of philosophical issues (noteworthy here is her chapter on the origins of morality).

The intellectualizing impulse and the Cartesian assumptions that go with it lead to some questionable interpretations and attributions and should be greeted with a healthy degree of skepticism. A thoroughly representational and mentalistic account of how we encounter and experience the world misses out on the socially diverse and manifold ways in which this encounter and experience is instantiated. Interaction theory, I suggest, is better in this regard.

[21] Mary Gauvain, *The Social Context of Cognitive Development* (New York: Guilford Press, 2000), 80.

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