Lisa Zunshine

What Mary Poppins Knew: Theory of Mind, Children's Literature, History

ABSTRACT: This essay investigates the phenomenon of "embedded" mental states in fiction (i.e., a mental state within a mental state within yet another mental state, as in, "Mrs. Banks *wished* that Mary Poppins *wouldn't know* so very much more about the best people than she *knew* herself"), asking if patterns of embedment manifest themselves differently in children's literature than they do in literature for "grownups." Looking at books for three age groups (nine to twelve, three to seven, and one to two), Zunshine finds significant differences in their respective patterns of embedment, while also arguing that a critical inquiry into complex mental states is not just a cognitive but also a historicist project. Drawing on research in developmental psychology, rhetorical narratology, and cultural history, as well as on digital data mining, this essay seeks to broaden the interdisciplinary and interpretive range of cognitive literary studies.

KEYWORDS: *children's literature, narratology, theory of mind, cultural history, Mark Twain, Laura Ingalls Wilder*

REMEMBER the time when Ben Rogers left off what looked like a really cool game—pretending to be a Missouri steam ship—to take over Tom Sawyer's chore of white-washing the fence?

> Tom gave up the brush with reluctance in his face, but alacrity in his heart. And while the late steamer Big Missouri worked and sweated in the sun, the retired artist sat on a barrel in the shade close by, dangled his legs, munched his apple, and planned the slaughter of more innocents. There was no lack

Lisa Zunshine is Bush-Holbrook Professor of English at the University of Kentucky, a Guggenheim fellow, and the author and editor of eleven books, including *Why We Read Fiction* (2006), *Strange Concepts and the Stories They Make Possible* (2008), *Getting Inside Your Head: What Cognitive Science Can Tell Us About Popular Culture* (2012), and *The Oxford Handbook of Cognitive Literary Studies* (2015). The author can be reached at lisa.zunshine@gmail.com.

of material; boys happened along every little while; they came to jeer, but remained to whitewash. (20)

Ben is sweating in the sun, Tom is sitting in the shade, and Twain is having fun with a Biblical reference. His twelve-year old Herod will soon "slaughter" more "innocents." With macabre logic, Twain describes those innocents as things inanimate. They merely "happen along," as a "material" on which "the retired artist" can work at leisure, dangling his legs and munching an apple.

What underlies these ironic twists—that is, the reason that we understand why the boys are described as being massacred and manipulated—is a series of psychological insights developed by Twain's protagonist. Tom doesn't want his friends to realize that he hates whitewashing the fence. He discovers that if he makes them think that he enjoys it, they'll see it as play instead of work and even pay him for the privilege of doing his chore.

Take another look at those insights. Each of them is structured as a mental state within a mental state within yet another mental state: Tom *doesn't want* his friends to *realize* that he *hates* whitewashing the fence; he *wants* them to *think* that he *enjoys* it. Granted, these are my formulations, but if you try to come up with one of your own, you may discover that, if you want to capture the complexity of the social situation conjured up by Twain, simpler descriptions of mental functioning, such as, "he *wants* them to do his work for him" or "they *think* that he *likes* painting the fence" won't do. In fact, they'll misrepresent what's going on, until you find a way to connect them, through another thought or intention. It seems, in other words, that, however you choose to phrase it, you'll need to recursively embed mental states on at least the third level.

The term "mental state" comes from cognitive science, where it's often used to describe functioning of theory of mind, a.k.a. mindreading, that is, our tendency to see behavior as caused by mental states, such as thoughts, desires, feelings, and intentions.[1] To understand the concept of "embedded" mental states, compare the four following statements. "My last name begins with Z" contains no mental states, embedded or otherwise. "I'm *glad* that my last name begins with Z because the teacher may not get to the end of the list today" contains just one mental state: me being happy about being at the end of the class list. "I am *afraid* that the teacher *will remember* that she hasn't called on me for a while" contains two embedded mental states; while "I *wonder* if the teacher *realizes* that I'm *hoping* that she won't call on me today because my last name begins with Z, and will thus on purpose start at the end of the list" contains three embedded mental states: me thinking about the teacher's thinking about my thinking.

Our routine social interactions may involve mental states embedded on high levels, such as third or fourth,[2] yet many of them probably don't require such complex embedments. For instance, I see my son pulling out a box of pencils, and I assume (without necessarily being consciously aware of it) that he *intends* to draw; I see my neighbor coming out of his house and strolling toward his car, and I assume that he *wants* to go somewhere. According to cognitive psychologist Patricia Miller, thinking about thinking about thinking (third-level embedment) "occurs in interpersonal

cognition in real life less frequently" than, for instance, thinking about thinking (second-level embedment). The former, as she puts it, "has a lower ecological plausibility" (622).

Hence an important difference between our daily mindreading and our experience of reading fiction as well as some literary nonfiction: As I have argued elsewhere,[3] fiction embeds complex mental states at a much greater frequency than happens either in our daily life or in expository nonfiction.[4] To make sense of what's going on in plays, novels, narrative poems, as well as in memoirs concerned with imagination and consciousness, we constantly embed mental states on at least the third level. The key word here is constantly, for I don't think that either literary critics or lay readers appreciate the true scale of this phenomenon. To put it starkly, fiction, as we know it today, cannot function on lower than the third level of embedment—unlike expository nonfiction, which may contain occasional forays into the third level, but can also subsist, quite happily, on just the first and second level.

Embedded mental states can belong to characters, narrators, (implied) authors, and (implied) readers, in a vast variety of combinations.[5] In "Tom wants his friends to think that he enjoys his chore," the third-level embedment involves the novel's characters. But at the same time yet another complex embedment arises from an intricate give and take between the implied author and his audience. The implied author *expects* that his readers will *appreciate* his mischievous *intention,* as he likens Tom, in the same breath, to King Herod and to a retired artist. Again, this is my formulation, but if you try to explain how this passage achieves its ironic effect, you are likely to find yourself speculating about how the author might have been intuitively anticipating his readers' thinking.

It would be wrong to assume, however, that we factor mental states of the implied author and reader into any complex embedment. Of course, we can say, "the implied author *wants* us to *know* that Tom wants his friends to think that he enjoys his chore," and call it a case of fifth-level embedment instead of third, but those extra levels will be redundant because they don't contribute anything to our understanding of the passage. In contrast, the references to King Herod and a retired artist are the kind of "communicative event" (Phelan and Rabinowitz 37) that necessitates a recognition of a particularly oriented intentionality behind it.

We don't usually articulate this to ourselves the way I just did. Indeed, in spite of the language that I use to describe it—such as "we recognize," "we are aware," or "the implied author wants us to know"—most of it doesn't rise to the level of conscious awareness. Nevertheless, something in us must keep track of those complex intentionalities, because, otherwise, how would we explain to ourselves, say, Twain's evocation of the Massacre of Innocents in a scene that had nothing to do with infanticide?

Most embedded mental states that I have discussed so far are *implied,* that is, readers themselves must deduce them to make sense of the story. But mental states can also be explicitly spelled out by the text. For instance, when Aunt Polly punishes Tom for breaking a sugar-bowl and then finds out that it was Sid who broke it, she can't bring herself to confess that she has been in the wrong—for "discipline forbade that"—and goes "about her affairs with a troubled heart," while Tom, perfectly aware of her remorse, is relishing it. He knows that his aunt wants him to forgive

her (third-level embedment), and he enjoys knowing that she wants him to forgive her (fourth-level). Or, as Twain puts it: "He *knew* that in *her heart* his aunt was on *her knees* to him, and he was morosely *gratified* by the *consciousness* of it" (25; my emphases).

What is crucial about these third-and-fourth-level embedments is that they do not just occasionally happen along. Instead, any given paragraph contains multiple complex embedments, sometimes implied, sometimes explicitly spelled out, often a combination of the two. As I am writing this and leafing through *Tom Sawyer,* I reach almost at random for a complex embedment here and a complex embedment there, but, in pretty much every case, I can turn to a group of sentences preceding or following any passage that I will have just quoted for you, and it will contain another implied or explicitly spelled-out complex embedment.

Complex embedments alone may not be a sufficient condition for fictionality. After all, literary nonfiction can have those as well. Still, it is significant that they are already there in the earliest surviving works of literature, such as *The Epic of Gilgamesh* (2000 BC),[6] even if the frequency of their appearance in the ancient epics is not yet comparable to what we start seeing later, for instance, in ninth-century Chinese tales of romance (such as "Ying-ying's Story"), in the eleventh-century Japanese novel, in the Restoration comedy, or in the eighteenth-century English novel. Today, we won't be amiss if we think of continuous complex embedment as yet another mark of what Roman Jacobson called the "literariness" of fiction, that is, a feature that makes fiction different from other discourses.

What does it mean to think of complex embedment of mental states as an essential feature of fiction?[7] It means thinking on three historical levels simultaneously, being aware of the "deep" (i.e., evolutionary) history of our species, of the more immediate cultural history of specific communities, and of literary history.

The "deep" history explains why we have an abiding interest in intentions. Theory of mind was evolution's "quick and dirty contrivance"[8] which helped our species to navigate its social environment hundreds of thousands years ago, and it stuck, in spite of its imperfections. As a result, today we may be particularly disposed to consume and seek out imaginary contexts shot through with mental states.

At the same time, as anthropologist Webb Keane observes, while "theory of mind and intention-seeking are common to all humans," they are "elaborated in some communities [and] suppressed in others" (131). While I don't want to make (indeed, would disagree with) any grand pronouncements about what kind of fictional narratives can or cannot thrive in a community in which capacities for mindreading are "played down," I think we can safely assume that communities in which mindreading capacities are "emphasized" offer their members different contexts for representing various shades and hues of intentionality.

Thinking about these contexts—let us call them genres—brings us to literary history. Genres have developmental trajectories of their own, which may result in the appearance of narratives that construct particularly intricate representations of thoughts and feelings *as well as* those that seem to have nothing to do with mental states and, in fact, come across as preventing readers from contemplating mental states. Having discussed such "anti-mindreading" narratives elsewhere,[9] I will give you here just one

example of their effect on readers. David Richter observes that his undergraduates at Queens College, CUNY, redouble their efforts to read complex intentionality into works of fiction that make it difficult for them to do that, such as, for instance, Alain Robbe-Grillet's novel *Jealousy.* As Richter reports, "My students read the repeated narrative about the centipede that horrifies A. . . . and is killed by Franck as coming from a (jealously obsessive) narrator noticing and recalling over and over Franck's responsiveness to A. . . . They even read the chapter in which we are told about how many banana trees are in each row in each segment of the plantation as coming from a mind that was forcing itself to pay attention to objective facts about his banana plantation in an attempt to stop himself from obsessively thinking about his wife A . . . and her possible relation to Franck."[10]

Keep in mind our mid-level historical perspective when you think about those students' reaction. They live in a culture that emphasizes mindreading and even has institutional settings, such as college courses, which reward their participants for speaking and writing about intentionality. This means that they learn early on to approach texts marked as fiction with the expectation of mindreading, and of a particularly elaborate kind at that, if they happen to encounter those texts in a college literature course.

As a corollary to Richter's experience with *Jealousy,* consider a recent study by Chris Gavaler and Dan Johnson, who have shown that, when faced with a text that is *a priori* judged as "having lower literary merit" (86), such as science fiction, readers tend to "exert less inference effort" (91) in situations that require supplying mentalistic explanations of characters' behavior. Ironically, by missing implied mental states, these readers confirm their initial biased view of some genres or settings as less conducive to the experience of literariness.

Literariness brought about by the continuous complex embedment of mental states is thus simultaneously a cognitive, a cultural, and a textual phenomenon. It is rooted in theory of mind, fostered by specific mind-reading communities, and instantiated by stylistic means unique to particular texts. When I map levels of embedment in fiction, I focus primarily on those stylistic means. This is not surprising. Style, after all, brings in mental states.[11] Still, I want you to remember that our conversation about mental states happens in a culture that encourages and (mostly) rewards these kinds of inquiries, and that our social fabric is comprised of expectations, assumptions, ethical affordances, and institutional contexts which sharpen our interest in intentions. In other words, I may talk about embedments as if they were "in" the text, but in reality they are distributed across culture and depend on communities socialized to particular forms of mindreading.

While my main reference point, here and elsewhere, is literary fiction, it should not be taken as an indication that genre fiction, such as fantasy, romance, or, indeed, science fiction, does not also depend on complex embedment of mental states. It does. The main difference between the two may be that the more formulaic works of fiction tend to embed mental states of characters and spell them out explicitly, while literary fiction embeds mental states of implied readers, writers, and narrators, as well as characters, *and* makes the reader infer implied mental states in addition to (and sometimes instead of) spelling some out.[12]

This claim, however, is only useful when qualified. As Gavaler and Johnson demonstrated, approaching a work of fiction with a category in mind impacts our mindreading effort allocation.[13] This means that when we talk about the difference between complex embedment of mental states in literary and genre fiction, we would do well to consider a previously unencountered text on its own merits rather than as a member of a category. That is, we may want to start out by looking at its embedment pattern, instead of expecting to see a certain pattern based on its genre affiliation.

Given that embedded mental states in fiction have been on the radar of students of literature for several years,[14] we already have some idea of what reading "for" them may entail. For instance, a recent collaborative study by Douglas H. Whalen et al., involving cognitive scientists and literary scholars, has demonstrated that subjects can be trained to judge levels of embedment quite quickly, and that while their judgments tend to display a "sizable agreement" (2016, 292), their disagreements open up new venues for literary analysis. Nevertheless, we are still at the early stages of grasping the full significance of patterns of embedment for different genres, media, and historical settings.

What makes this line of inquiry particularly challenging is that its underlying theoretical foundations are a moving target. For, on the one hand, one is encouraged by the compatibility between what we are learning about embedment and a broad range of paradigms from our own discipline, ranging from Bakhtinian dialogism (Zunshine, "Bakhtin, Theory of Mind") and Speech Act Theory (Rabinowitz and Bancroft) to narratology (Rabinowitz), studies in law and ethics (Lee), and mimetic imagination (Cave). On the other hand, to the extent to which cognitive literary critics working with embedment draw on research in cognitive science, they have to contend with the provisional state of their assumptions about underlying cognitive processes and be prepared not just to revise their earlier views but also to admit that they may not yet have a clear understanding of what's going on.

My goal here is to show how insights about patterns of embedment in fiction can be expanded to a new domain: children's literature. Some aspects of my argument are indeed provisional, for its cognitive foundations are being adjusted even as I am writing, with cognitive psychologists revising their earlier assumptions about discrete stages of theory of mind development in children. I begin with a review of this research, followed by a preliminary assessment of patterns of embedment in stories for children aged 9–12, 3–7, and 1–2. These age groupings are taken from the most recent editions of Freeman's, Gillespie's, and Lipson's guides to children's books and cross-checked with scholastic.com.[15]

I chose *Tom Sawyer* as an entry point into this conversation because of its historically ambiguous status as a book for children, ambiguity that may have been informed by readers' intuitive awareness of its patterns of embedment. As I move from Twain's novel to contemporary books for young readers, I explore the productive tension between such intuitions and the historicity of our assumptions about what constitutes a work of fiction written for children. Cognitive historicism[16] has already made significant inroads in early modern and nineteenth-century studies.[17] With this essay, I hope to introduce this approach into the thriving field of children's literature studies, particularly given its practitioners' growing interest in cognitive science.[18]

Review of Research in Developmental Psychology

At what age do we start embedding complex mental states in our daily social life and thus, presumably, become receptive to narratives featuring such embedments? Until recently, psychologists thought that children begin to appreciate false beliefs—that is, realize that people may believe something that is not, in fact, true—around the age of 4.[19] Then, between 5 and 7, children become attuned to "doubly embedded" representations, that is, they become aware "not just that people have beliefs (and false beliefs) about the world, but that they also have beliefs about the content of others' minds (i.e., about others' beliefs), and similarly, these too may be different or wrong" (Astington et al. 133).[20]

The traditional view that before the age of 4 children are not ready to attribute false beliefs to others was challenged in 2005 by Kristine Onishi and Renée Baillargeon, who showed that 15-months-old infants may already understand false beliefs. Since then, numerous other studies have pushed the age for such understanding even lower.[21] To complicate matters further, "developmental research emphasizes that [theory of mind] has several components" (Mumper and Gerrig), hence it's not always clear which component, at its particular stage of maturation, is affecting a given outcome. While different theories have been proposed to account for the "puzzle of theory of mind" in infants,[22] for the purposes of my argument I will settle on the view that "the infant mindreading system develops gradually, transforming into the adult one through incremental learning and piecemeal conceptual change" (Carruthers 159). The changes that take place around the ages of 4, 5, and 7 may still represent important milestones in theory-of-mind development, but they can now be understood as steps in a continuous integrated process rather than dramatic breakthroughs.

Embedded mindreading assumes new prominence as children enter adolescence. As Miller et al. ruefully observe in their essay, "Thinking about People Thinking about People Thinking about . . . ," "often to their pain, adolescents are much more gifted" at "wondering what he thinks of me" and "what he thinks I think of him" than "first graders" are (623). The drama of alliance-building and sexual maturation is inseparable from reading and, inevitably, misreading of one's own and others' embedded intentions.

Although cognitive scientists have looked at the frequency and types of mental states in children's stories, they have not looked specifically at embedment. Thus Jennifer Dyer et al. used a sample of ninety books to see if "the information about mental states" present in children's storybooks differed in books for younger preschoolers (3–4 year olds) and older preschoolers (5–6 year olds), "either in quantity or kind" (19). What they found was that "mental state information in storybooks for young children" doesn't simply increase "with the children's sophistication from 3 [to] 6 years of age"; instead, books for younger and older children are "notably similar in the rates of types and tokens of mental state expressions and the richness of mental state concepts, particularly those expressed by cognitive state terms and situational irony." Yet, at the same time, books for older children contain "more mental state terms [and] more varied mental state vocabulary." Additionally, more of the books for

older children feature a "variety of references from more of the different categories of mental state." (34)

The textual dynamic described by this study as "situational irony" comes close to what I call "implied embedment." Dyer et al. use this expression to refer to moments when readers are aware of, say, a disjunction between two characters' perspectives, even if it is never explicitly spelled out. Observe, however, the difference between the two terms. "Situational irony" is relatively abstract, while "implied embedment" calls for an articulation of the relationship among the minds involved, which, in turn, allows us to calculate the level of embedment, as in, "the reader is aware that character A doesn't know what character B is thinking" (third level).

Authors of another study, Joan Peskin and Janet Astington, wanted to see if increased exposure of preschoolers to explicit references to mental states would result "in a greater conceptual understanding of one's own and other people's beliefs" (254). What they found was that hearing such "terms in stories is less important than having to actively construct one's own mentalistic interpretations from illustrations and text that implicitly draw attention to mental states" (253). Moreover, leaving preschoolers aside for a moment, Peskin and Astington contend that works of fiction routinely force their readers to do just that, that is, to construct their "own mentalistic interpretations" of the action: "Dramatic tension in stories is created when the various characters have disparate knowledge with regard to the action. This may be through error: The reader knows that Romeo does not know that Juliet lies drugged, not dead. Or it may be through deception: Pretending his assigned chore is an adventure, Tom Sawyer tricks his friends into whitewashing the fence" (267).

What Peskin and Astington call "disparate knowledge with regard to action" is similar to Dyer's "situational irony." Once again, we come close to the concept of "implied embedment," particularly with Peskin and Astington's emphasis on texts "that implicitly draw attention to mental states." Let us see, however, if we can go further than simply recognizing some moments in fiction—in this case, fiction for children— as instances of dramatic irony (or "situational irony," or "disparate knowledge in regard to action") if we inquire more minutely into the configuration of mental states involved.

Age 9–12

Among the books recommended for children aged 9–12 are Twain's *Tom Sawyer,* Frances Hodgson Burnett's *The Secret Garden,* A. A. Milne's *Winnie the Pooh,* Laura Ingalls Wilder's *Little House in the Big Woods,* Tove Jansson's graphic novel *Moomin Falls in Love,* Jeff Kinney's "Diary of a Wimpy Kid" series, Lewis Carroll's *Alice in Wonderland,* P. L. Travers's *Mary Poppins,* and E. B. White's *Stuart Little.* I list below some examples of third-level embedment more or less in their order of appearance in these stories, leaving out for now *Tom Sawyer* and *Little House in the Big Woods.*

We learn in the first paragraph of *The Secret Garden* that when Mary was born, her nurse was made to *understand* that if she *wanted* to *please* her mistress, she should keep the child to herself. As the narrator explains, Mary's mother "had not wanted a

little girl at all, and when Mary was born she handed her over to the care of an Ayah, who was made to understand that if she wished to please the Mem Sahib she must keep the child out of sight as much as possible" (1). When Mary's mother dies and the little girl is shipped to England, she meets Mrs. Medlock, the housekeeper of her new guardian. Mary dislikes her and tries walking further away from her because she *hates* to *think* that people would *assume* that she belongs to her: "It would have made her angry to think people imagined she was her little girl." When Mrs. Medlock tells her about her new home, Mary listens "in spite of herself," but she *doesn't want* Mrs. Medlock to *think* that she is *interested:* she "did not intend to look as if she were interested" (6).

In the first chapter of *Winnie the Pooh,* Pooh, in his quest for honey, floats up to a bees' nest on his balloon and hopes that the bees will think that he is a small black cloud in the sky. But the honey is still out of reach, and, moreover, he worries that the bees suspect something. So he asks Christopher Robin for help:

> "Christopher Robin!" "Yes?" "Have you an umbrella in your house?" "I think so." "I wish you would bring it out here, and walk up and down with it, and look up at me every now and then, and say 'Tut-tut, it looks like rain.' I think, if you did that it would help the deception which we are practising on these bees." Well, you laughed to yourself, 'Silly old Bear!' but you didn't say it out loud because you were so fond of him, and you went home for your umbrella. (14).

Short as it is, this passage contains several complex embedments: Pooh *doesn't want* the bees to *know* that he *wants* to steal their honey; Christopher Robin *doesn't want* Pooh to *know* that he *thinks* his plan won't work; the narrator *knows* that Christopher Robin *doesn't want* to hurt Pooh's *feelings.*

In *Diary of a Wimpy Kid: Rodrick Rules,* the main protagonist, Greg, observes his parents "acting all lovey in front of [their youngest son] Manny" (15), because they *don't want* Manny to *think* that their arguments mean that they *don't love* each other. (Does the implied author want his grownup readers to cringe in recognition as they think of the times when they hoped to manipulate their own kids the same way? I leave it up to you to decide if this particular embedment is part of our "mentalistic interpretation" of the action.) On another occasion, Greg reports *thinking* about his father's *feelings* about Greg's older brother's *intentions*: "I'm pretty sure Dad's worst fear is that . . . Rodrick will want to follow in Bill's footsteps" (35).

In *Moomin Falls in Love,* Moomintroll develops a crush on a circus performer, La Goona. His girlfriend, Snorkmaiden, is heartbroken and lonely. As she confides to Mymble, "If you only *knew* how I have *longed* for a friend's *understanding* and advice" (17). Mymble suggests pretending that she doesn't care for Moomin anymore, but when Snorkmaiden follows her suggestion, she's bitterly disappointed because Moomin's only too happy to learn that he can do anything he wants (18). Moreover, it transpires that La Goona fancies a circus acrobat who can lift big stones. Moomin tries to wrench a heavy boulder out of the ground and fails. Little My, who observes

his effort, tells him, "I *guess* you must *think* of an entirely different way of *impressing* La Goona" (19; my emphases throughout).

In *Alice in Wonderland,* Alice "[*thinks* that she] can *remember feeling* a little different" (29). In *Mary Poppins,* Mrs. Banks *wishes* that Mary Poppins wouldn't "*know* so very much more about the best people" than she *knows* herself (26). (This is an explicitly spelled-out embedment, but an equally interesting implied one is lurking just beneath the surface, involving a grownup reader's awareness of Mary Poppins's manipulation of her class-conscious employer.) Furthermore, Jane and Michael can't figure out if Mary Poppins only *pretends* to get *angry* at them and not *understand* what they *mean* when they say that her Uncle likes "rolling and bobbing on the ceiling" (56); and Jane "*wonder[s]* if she would ever be able to *remember* what Mrs. Corry *remembered*" (133; my emphases throughout).

In *Stuart Little,* we learn that Stuart's father, "Mr. Little, was *not at all sure* that he *understood* Stuart's *real feelings* about a mousehole" (11). Later on, the family cat wants everyone to think that Stuart ran down the mousehole while he's actually trapped in a window shade. Stuart knows what the cat had in mind, yet when he is finally found and rescued, he decides not to tell on the cat. Instead, he *wants* his family to "*draw [their] own conclusions*" about who *might have wanted* them to *think* that he would run down the mousehole, and why (25; my emphases throughout).

It appears that in spite of obvious differences in their subject matter, the pattern of embedment that one encounters in books for this age group is similar to the one encountered in fiction for "grownups." Both feature complex (that is, at least third-level) embedments of mental states, which are either implied or explicitly spelled out and associated with characters, narrators, readers, and authors.

One important difference—at least in this sample—seems to have to do with the frequency of complex embedments. In story after story, from *Alice in Wonderland* to *Stuart Little,* I had to actively search for third-level embedments, sometimes coming up empty for a whole page. This situation would be difficult to imagine in literary fiction for grownups, in which the main effort required to find an instance of complex embedment involves opening the book. (There, even when descriptions of mental states are intentionally omitted, to make it seem that characters lack what we may call interiority, embedded mental states are still implied.[23])

Let me complicate this narrative of difference, if only up to a point. Books in this age bracket (9–12) are sometimes characterized by what Ulrich Knoepflmacher and Mitzi Myers call "cross-writing." That is, they activate a dialogue "between phases of life we persist in regarding as opposites," appealing in different ways to young and adult readers (viii). And I don't just mean implied embedments, as when adult readers are aware of Travers's intention to show that Mary Poppins knows how to tacitly exploit Mrs. Banks's class anxieties. I also mean subtle interactions between the author and the reader which arise from the parodic feel of the text. As Sandra Beckett observes, to "appreciate parody [of, for instance, Carroll's Alice books] the reader must first recognize the intent to parody another work and then have the ability to identify the appropriated work and interpret its meaning in the new context." (175) This recognition of intent is already a complex embedment—I *realize* that the author *wants*

me to *think* of text A as I am reading text B—even before we factor in mental states of characters whose motivations we may have to interpret in light of this "new context."

What does a reader's potential awareness of an author's intent do to my present argument about a somewhat less frequent incidence of complex embedment in fiction for children aged 9–12 as compared to fiction for adults? Should we say that at least in some of these books, the frequency of complex embedments may approach that encountered in books for grownups, but only for those readers who "possess all of the codes necessary to understand all of the parodic allusions" (Beckett 176)? A version of this argument—which is that there are always more embedments in a text than meet a casual eye—can be made about many works of literature; for, experienced readers bring to them the "mastery of the codes of fiction"[24] which enables them to be more attuned to various forms of intentionality present in the text than less experienced readers may be. This effect seems to be indirectly borne out by the research of psychologists who suggest that "less experienced readers [find] literary characters a bit more clear than the more experienced readers" (Kidd and Castano), which may mean that long-term exposure to literary fiction makes one more prone to look for complex intentionality and less willing to settle for unambiguous explanations of characters' motivations.

History and Cognition: Case Study One (*Tom Sawyer*)

This is the point at which we revisit Twain's novel. Although it is typically placed on the same reading level as *Mary Poppins, Alice in Wonderland,* and *Stuart Little,* its pattern of embedment differs from that prevalent in those books. That is, even if we take into account their cross-writing tendencies and say that an experienced/adult reader intuits more intentionality in them than does a less experienced/child reader, they still do not live up to the furious rate with which complex embedments (especially implied ones, involving the narrator and the implied reader) present themselves in *Tom Sawyer.* When it comes to the frequency of such embedments, Twain's novel is on par with unambiguously "grownup" texts which have hitherto been studied by cognitive literary critics working with embedment (e.g., novels by Murasaki Shikibu, Cao Xueqin, Frances Burney, Jane Austen, Lev Tolstoy, E. M. Forster, Thomas Mann, Edith Wharton, and Zadie Smith).

Why, then, is *Tom Sawyer* considered to be a book for children? Several factors seemed to have made it so. First, as Beverly Lyon Clark has shown in her study of cultural construction of children's literature, Twain "himself notoriously vacillated about the intended audience for what are now sometimes called his boy books" (80). In July 1875, he wrote to William Dean Howells that *Tom Sawyer* was "not a boy's book at all," that it was "only written for adults" and would "only be read by adults" (Clemens and Howells 91). When Howells suggested that it should rather be (to use our present term) a cross-writing novel, Twain responded by "toning down [its] satire and strong language" (Clark 80). In January 1876, he was able to assure Howells that *Tom Saywer* was now "for boys and girls" (Clemens and Howells 122). In the preface to the pub-

lished novel, he evokes both audiences, hoping that, though "intended mainly for the entertainment of boys and girls, . . . it will not be shunned by men and women on that account" (3).

And nineteenth-century men and women did not shun *Tom Sawyer.* It was said to "appeal to all ages," reflecting, among other things, a perspective of a culture "in which the [grownup and children] audiences were not yet fully discrete" (Clark 84, 81). In that culture, a review of books entitled "For the Young" could still appear in the *Atlantic* (a practice apparently discontinued after 1903), stating that, although a child "will devour tales like Tom Sawyer or Huckleberry Finn, . . he cannot understand their real merit. . . . The adult intelligence is necessary to understand them" (quoted in Clark 89).

But although both "tales" were initially thought to demand the "adult intelligence," that perception did not last. Over the course of the twentieth century, *Huckleberry Finn* was gradually elevated to the "great American novel," an elevation which depended, Clark argues, on the simultaneous relegation of *Tom Sawyer* to "kiddie lit." As she puts it, the construction of *Huckleberry Finn's* greatness "at the expense of *Tom Sawyer*" entailed erosion "of a fundamental respect for childhood and children's literature" (101). While largely agreeing with her account, I want to add in a cognitive factor, by taking a closer look at the difference between the two novels' pattern of embedment and showing how it may have made easier (if not necessarily determined) the elevation of one book at the expense of the other.

I take as my starting point James Phelan and Peter Rabinowitz's contrast between the respective implied authors of *Tom Sawyer* and *Huckleberry Finn.* As they put it, Twain of *Tom Sawyer* speaks in the "avuncular" voice—"one that sold well in the public marketplace" but that may have demanded less work from his readers than the voice behind *Huckleberry Finn,* which is characterized by a "multilayered" (163) ethical consciousness. Thus in one of the passages used by Phelan and Rabinowitz to illustrate their point,

> Huck describes the widow Douglas's response to his return to her home this way: 'The widow she cried over me, and called me a poor lost lamb, and she called me a lot of other names, too, but she never meant no harm by it.' . . . Huck misinterprets the widow's joyous religious references as name-calling because he doesn't recognize the New Testament source—and that misinterpreting leads him to undervalue the ethical quality of her response. Yet this comic failure of understanding simultaneously reveals a moral strength. Although Huck's ignorance means that he fails to grasp both the extent of the widow's joy and her beliefs about what his return means, Twain demonstrates that Huck's ethical compass is sufficiently sensitive for him to appreciate that she 'never meant no harm.' . . . The overall effects are to bring us affectively and ethically closer to Huck even as we continue to register our interpretive difference from him. (35)

There are multiple third-and fourth-level embedments at work here. To spell out just a few of them, the implied author *wants* us to *know* that Huck *doesn't understand*

the widow's *motivations* (i.e., he "undervalues the ethical quality of her response"). At the same time, he *wants* us to *know* that Huck *understands* the widow's kind *intentions.* Crucially, it seems that to experience the full rhetorical and emotional impact of the passage—which brings us "closer to Huck even as we . . . register our interpretive difference from him"—we have to process both of these complex embedments simultaneously.

I actually don't know what this kind of dual ethical processing entails in terms of mindreading. I strongly believe that it *does not* simply ratchet up the overall level of embedment, adding up, say, to the seventh or eighth level. Still, something peculiar is happening here, something that cognitive scientists who study complex embedments in laboratory and in real-life social interactions don't tend to encounter.[25] At the very least it shows that, while remaining inextricably bound with the social, literature has run away with it, "having amassed a repertoire of extremely nuanced stylistic tools for embedding mental states,"[26] as well as having cultivated cultural niches in which the capacity for this kind of somewhat "ecologically implausible" mindreading is prized and rewarded.

This is not to say that *Tom Sawyer* never once demands such dual ethical processing from our theory of mind, but that such demands are more frequent in *Huckleberry Finn* and central to the development of its main character, that is, to "the wisdom and understanding [Huck gains] during the trip down the River" (163). Huck's reaction to the widow's response comes early and, as Phelan and Rabinowitz put it, is a "fairly simple" case of the split ethical evaluation. The "same kind of interplay," only "with more subtlety and greater consequences," will mark Huck's "self-examination" later, when he decides "to go to hell rather than inform" the owner of Jim (i.e., the runaway slave and Huck's friend) of Jim's whereabouts (35).

In fact, so integral is this pattern of "multilayered communication" with the reader to the voice of this novel that when at one point (i.e., when Tom plots to arrange Jim's escape from Silas Phelps), Twain abandons it, lapsing into the broad humor familiar to the readers of *Tom Saywer,* the change feels like "a serious come-down" (163). The story still gets told through a series of complex embedments—what with all the lies that Tom is feeding the Phelpses and with the implied author winking to the reader as he parodies the chivalric romance—but the dual ethical processing is notably absent.

Where does it all leave us in the conversation about the twentieth-century designation of *Tom Sawyer* as "kiddie lit"? Looking at the dual ethical processing expected from readers of *Huckleberry Finn*—which marks some of its third- and fourth-level embedments as qualitatively different from the third- and fourth-level embedments in *Tom Sawyer*—we may speculate that had Twain never written *Huckleberry Finn,* the frequency of such embedments in *Tom Sawyer* would have made its relegation to children's literature less certain. But with *Huckleberry Finn* next to it, the intuitive awareness of a different kind of sociocognitive complexity underlying the latter's affective charge may have contributed to this cultural phenomenon.

Still, the main payoff of factoring the cognitive perspective into the historicist explanation of this process offered by Clark may be a more nuanced understanding of why the designation of *Tom Sawyer* as "kiddie lit" remains troubling enough for critics to keep wanting to account for it. The cascading frequency of complex em-

bedments expected from the reader of *Tom Sawyer*—a frequency that, though not inconceivable in a book for children,[27] is nevertheless rare—may be the reason why this novel does not stay meekly put in the category of kiddie lit. For as long as we place in that category texts that embed complex mental states of characters, narrators, and implied readers, but not at the same high rate that we've come to expect from a work of "grown-up" literature, *Tom Sawyer* shall remain an outlier.

History and Cognition: Case Study Two
(*Little House in the Big Woods*)

Tom Sawyer is not the only outlier that I found in the 9–12 age group. An even more striking case, though for the opposite reason, is Ingalls Wilder's *Little House in the Big Woods.* It contains very few embedded mental states and practically no third-level embedments. Though a highly compelling narrative in its own right, it has, as its readers observe, "no plot."[28] Instead, we learn details of life on the frontier: how bullets were made, how butter was churned, and how meat was cured. The near-total absence of social situations that would call for attribution of complex mental states is, one can safely say, extremely unusual for a text considered to be a novel. To see how this classification came to pass, we have to inquire, once again, into the circumstances of its writing and publication.

The original version of the "Little House" series was called *Pioneer Girl.* It was an autobiographical account of Wilder's "family pioneering experiences in the American West," intended for adults. As Wilder's biographer, Pamela Smith Hill, puts it, it was "nonfiction, the truth . . . as only Wilder remembered it" (xvi).

What happened then was that *Pioneer Girl* could not find a publisher. A typical rejection, from *Country Home* magazine, praised it for "some very interesting pioneer reminiscences," yet explained that they had "no place for non-fiction serials" (quoted in Smith xliii). With the assistance of her daughter, established writer Rose Wilder Lane, Wilder then turned her autobiographical manuscript into a book of fiction for children. As Smith puts it:

> Lane not only switched audiences, she switched genres—from nonfiction to fiction. When she replaced Wilder's intimate first-person voice, her 'I' narrator, with a third-person narrative, the juvenile manuscript instantly became fiction. (xxxvi)

Did it? If we think of fiction in a broader sense of the term, as something fabricated rather than factual, we can say that Wilder's manuscript "became fiction" even earlier, when, for instance, to make *Pioneer Girl* more dramatic, Lane adjusted the timing of the Ingallses' move to Wisconsin to bring them into contact with a notorious family of Kansas mass murderers (Smith xxx). Or we can say that the fictional status of the Little House books was clinched when, as staunch opponents of the New Deal, Wilder and Lane took "serious liberties with the facts of the Ingallses' lives" to portray the U. S. government as "nothing but destructive to the enterprising individual." Or that

it happened when they "entirely made up or altered in fundamental ways" scenes that testified to Laura and her sisters' schooling "in emotional and physical stoicism" (Fellman 6–7, 106) and to their family's socioeconomic self-reliance. As far as historical accuracy goes, the series is certainly fiction: a heady blend of ideology and emotional warmth, mythologizing life on the frontier.

Yet we have also come to intuitively expect something else from fiction, particularly with the novel as its flagship genre. While the presence of complex embedments alone does not determine if a text is considered fiction, the near-absence of such embedments in *Little House in the Big Woods* makes one wonder just how those joint appellations—that of fiction and that of novel—came to stick. To see how it happened, we retrain our attention on its cultural reception.

And what we learn when we look at the history of that reception is that readers have always seen *Little House in the Big Woods* in the context of other books in the series, which are more "novelistic" in their outlook. For, as Wilder continued to draw on *Pioneer Girl* for her subsequent volumes, she went further than merely substituting "I" with "Laura." As Smith observes:

> [As] Wilder transformed her original material into fiction for young readers, she grew both as a writer and ultimately as an artist, creating dynamic characters, building more suspenseful stories, and manipulating her themes more masterfully. (lv)

From a cognitive literary perspective, we can see the evidence of this transformation in a gradual increase of the number of situations calling for third-level embedment. Take *Little Town on the Prairie,* "the best-selling of the Little House books," which serves for many readers as the gateway into the series. It turns out to owe very little to the original manuscript: the "comparable segment" of *Pioneer Girl* is "only six and a half pages long." In this "product of . . . Wilder and Lane's imaginations" (Fellman 85), Laura *feels shocked* when her sister Mary tells her that she *knows* why Laura used to *want* to slap her and that she thinks she deserved being slapped (12), and she feels bad about reading a poem in a fine book that she finds in a drawer because she *realizes* that her mother *wanted* that book to be a *surprise* gift for her (140).

Similarly, in *These Happy Golden Years,* older Laura is "furiously angry" at her student, Clarence, and trying to conceal her anger, for "as her eyes met his she *knew* that he *expected* her to be *angry*" (49). When going for a ride with Almanzo and her potential rival, Nellie, Laura is thinking that her acquaintance, Mr. Boast, knows that she intends to take Nellie down a road that she won't like: "His eyes laughed at Laura. She was *sure* he *guessed* what *was on her mind*" (176). Later on, Laura is having a similar exchange of glances with Almanzo: "she let her eyes twinkle at him. She *didn't care* if he did *know* that she had frightened the colts to *scare* Nellie, on purpose" (184; my emphases throughout).

This is very different from the inaugural volume, which focuses on how things are made as opposed to what people think and feel. Still, because the Little House books are treated as one continuous narrative—a story of Laura's "transition from a tomboyish girl to a marriageable woman" (Fellman 127)—it's possible that the sociocognitive

complexity of the later volumes colors our perception of the first. Had those later volumes been constructed similarly to *Little House in the Big Woods*—that is, had they focused on objects and processes to the exclusion of complex social dynamics—perhaps the *Little House in the Big Woods* wouldn't have been considered a novel today. Instead, it might have been viewed as an arresting description of a child's experience on the frontier—for, remember that expository nonfiction does very well with lower (i.e., first and second) levels of embedment!—perhaps something along the lines of Susan Sinnott's *Welcome to Kirsten's World, 1854: Growing Up in Pioneer America.*

To see how the perception of the Little House books as one continuous narrative has become entrenched in American popular culture, we can inquire into the role of the 1974–1983 television series, which didn't follow the original's division into volumes (indeed, didn't follow the original at all). I prefer, however, to look at another, subtler factor, one that has to do with Little House's career as a mainstay of basal readers used by US elementary school teachers from the 1930s until the 1990s. The original inclusion in basal readers owed to the fact that Wilder's book seemed to fit several diverse criteria articulated by 1920 research studies, which called for more "adventure stories (boys) and home-and-school stories (girls)" as well as for more "informational books." The criteria changed by the 1970s—with stress on the emotional security provided by family and on the child's ability "to master environment without adult help" (Fellman 123, 127–28). Once again, Little House books met those criteria because they have long been perceived—and taught!—as a story of Laura's personal journey toward maturity and independence, made possible by her warm, supportive family.

So here we have *Tom Sawyer* classed with "kiddie lit" even as the frequency of its complex embedments makes it stand out among other books in its designated cohort, and *Little House in the Big Woods* considered a novel in the absence of any complex embedments. What these two outliers tell us is that, while sensitivity to patterns of embedded mental states offers literary scholars a useful starting point, to become an effective critical tool it has to be combined with historicist analysis. A critical inquiry into embedded mental states thus emerges as not just a cognitive but also a historicist project.

Age 3–7

3–7 is an extremely interesting age when it comes to embedment, because this is when children are more consistently found to be aware of first- and second-order false beliefs in themselves and others. Although the boundary between books for seven-year olds and nine-year olds is porous, here is one intriguing pattern found in stories signposted specifically for the younger age group.

Some books marked for ages 3–7 contain just one third-level embedment, although it can be repeated several times either with different characters or in slightly different settings. This embedment is central to the story, constituting, in effect, its punch line, its raison d'être. It's typically structured as a dawning awareness, on the part of young readers, that they know something about one character's thoughts that another character doesn't know. (Literary scholars may recognize this as a preschool

version of dramatic irony,[29] and thus talk of cultural scaffolding involved in shaping children into future mature readers, while developmental psychologists may note its similarity to their made-up scenarios used in double-embedment false-belief tests with six-year olds.)

Thus Jon Klassen's *This Is Not My Hat* follows the path of a small fish who has stolen a big fish's hat. Young readers gradually *realize*—and presumably delight in their realization[30]—that the small fish erroneously *believes* that the big fish *doesn't know* who has stolen its hat. Julia Donaldson's *Gruffalo* tells a story of a big scary monster who believes a mouse's claims that she's the most powerful animal in the forest. Once more, preschoolers are "in" on the joke: they *know* that the Gruffalo *doesn't realize* that when he's walking behind the mouse in the forest, other animals are scattering because they're *afraid* of him and not of the tiny mouse.[31]

Similarly, reading Pat Hutchins's *Rosie's Walk,* children *know* that Rosie the hen *doesn't know* that the hungry fox *wants* to devour her, and that she has one lucky escape after another. In Gene Zion's *Harry the Dirty Dog,* the premise of the story is that Harry's owners don't recognize Harry, a white dog with black spots, because running around the city and getting dirty has turned him into a black dog with white spots. The young readers thus *know* that Harry's owners *don't suspect* that the reason this strange dog brings them a scrubbing brush (a hateful implement, which Harry earlier buried in the backyard) is that he *thinks* that, once they wash him, they'll *recognize* him as their beloved pet.

The positive affect presumably elicited in young readers by such embedments is a fascinating phenomenon. One may argue that it derives from identification with the characters,[32] particularly those who get to have their way, such as Rosie, Harry, the big fish, and the little mouse. I tend to think that it comes from the perception of social mastery fostered by the plot. The child knows—and she knows that she knows!—that the small fish doesn't realize that the big fish has already figured out who has stolen its hat and is on the way to catch the thief. So the big fish may end up eating the little fish, but it's the young reader who is having a satisfying experience of being on top of the epistemological food chain.[33]

We may do well to remember here that contemporary writers for young children didn't invent the concept of a triply-embedded punch line, and that it has been long present in "trickster" stories worldwide. Thus the premise of *Gruffalo* is based on a classic Chinese tale of a tiger and a fox. (The fox wants the tiger to think that, when they walk together, the fox slightly ahead, other animals run away because they are afraid of the fox.) We find triply-embedded mental states in West African folklore (e.g., Brer Rabbit wants Brer Fox to think that he's afraid of the briar patch); in Native American legends (e.g., Badger knows that Coyote thinks that Badger is lying to him when he says that there is no food in the sack that the Badger is carrying on its back); in Bornean folktales (e.g. a mouse-deer wants a crocodile to think that the mouse-deer doesn't know if the body in the water is the crocodile or just a log); and in Russian fairy tales (e.g. an exhausted old house cat wanders into the forest, where he meets a fox who promptly offers to marry him. Once married, the fox has to figure out how to protect and feed her new husband. She decides to make a bear and a wolf

think that the cat is an important government official who'll be angry at them if they come to see him without substantial gifts).

Of course, not all trickster tales feature triply-embedded mental states. Just so, not all are geared toward children. Still if we only consider those that do and are, it is an extremely suggestive sociocognitive phenomenon. It seems that many cultural traditions offer young children stories featuring doubly-embedded false beliefs just at the time when children go through a developmental stage that makes them particularly attuned to such beliefs. In this particular case, the "cultural" and the "cognitive" appear to form a feedback loop, shaping and reinforcing each other.

Age 1–2

Recall that in the study of children's books by Dyer et al. (which found that books for younger and older children are similar in their "richness of mental state concepts"), the youngest subjects were three years old. I wonder if, at three, children are already too far advanced on the developmental trajectory that leads to awareness of (first-degree) false belief. For, that awareness is not achieved suddenly once the child turns four. It is being continuously built up, in conjunction with other "maturational factors," such as language ability.[34]

This is why I believe it's worth our while to take a closer look at books for toddlers.[35] (This age group, as you remember, is now a subject of controversy: it used to be assumed that they have not yet reached the theory-of-mind milestone of appreciating false beliefs, but now experimental evidence suggests that one may elicit such appreciation from them.) What I found after a preliminary study of books in this group, is that they do demonstrate a significant drop in third-level embedment. This is not to say that they don't contain references, both explicit and implied, to mental states: They do. (This is a key difference between my approach and that of developmental psychologists studying children's theory of mind: they look at mental states, I look at embedded mental states.) What they don't seem to contain—at least those that don't function as crossovers which appeal both to toddlers and to older readers—is third-level embedment.

In looking at books geared toward children aged 1–2, I focus on those which lay a claim to telling a story, as distinct, that is, from books of colors, numbers, body parts, etc., which don't.[36] There is, for instance, Curious George at the Zoo, A Touch and Feel Book. (Not to be confused with the original Margret and H. A. Rey's "Curious George" stories and their more recent versions: The touch and feel books do not reproduce any of their plots. Indeed, the only thing they seem have in common with the "real" Curious George series are the two main characters.)

We learn on the first page that, the "man with the yellow hat is taking George to the Zoo today. There are so many things to see and do and touch." Most of the pages that follow focus on the sensory: "Feel the black and white penguin's thick coat," "Feel the smooth shiny water," "Feel the rhino's rough skin." The book does contain references to mental states (e.g., "Where has George gone? He would love to watch the pink flamingo standing on one leg"), but it has no complex embedments.

Note that *Curious George* currently has 175 reviews on amazon.com, and 62 of them mention explicitly the age of the young reader (another 10 merely say that the reader is a "toddler"). Out of these 62, 58 cluster between the ages of 4 and 24 months. While we may not want to put too much emphasis on this bit of digital data mining, it offers a useful glimpse at the perspective of caregivers who actually buy these books and judge their appropriateness for their young charges.

Here is another example: Disney's *Pooh's Honey Trouble,* based, loosely, on the first chapter of Milne's *Winnie the Pooh.* That's the chapter in which Pooh hopes to fool the bees into thinking that he is a black cloud and not a honey-stealing bear floating on a balloon, and in which Christopher Robin doesn't want to hurt Pooh's feelings by telling him that his plan won't work. In Disney's version, Pooh wakes up in the morning feeling hungry and goes out in search of honey. He comes across several of his friends, busy doing what they like to do. Then Christopher Robin finds out that Pooh is hungry and gives him a balloon, with which he finally manages to get some honey:

> Winnie the Pooh awoke one morning with rumbly in his tumbly. 'Oh, bother,' he said, finding his honeypots not at all full. The trouble with empty honeypots, thought Pooh, is that they're so very empty. Pooh went to see Piglet who was busy gathering haycorns. Pooh helped his friend for a bit, but picking haycorns didn't help to take his mind off his rumbly tummy, so he continued on. . . . 'Hello, Pooh Boy!' said Tigger, bouncing his way through the forest. 'Tiggers love bouncing.' 'And bears love honey,' Pooh replied in a rumbly voice. . . . When Christopher Robin heard of Pooh's honey trouble, he gave him a balloon. The balloon was very nice, in a balloonish sort of way, but Pooh was quite sure it wouldn't make his tummy any less rumbly. 'Silly old bear,' said Christopher Robin, watching Pooh float up, up, up, up to the spot where the honey was. And, at last, Pooh's tummy wasn't rumbly anymore.' (n.p.)

What kind of embedments do we have here? Most of them are first level, such as "Pooh wants honey," "Tiggers love bouncing," "Rabbits like carrots," "Piglet likes haycorns," although there are also some implied second-level ones, such as "Pooh knows that Piglet likes haycorns," or "Christopher Robin knows that Pooh doesn't understand what the balloon is for."

There are currently 72 reviews of this book available,[37] and 29 of them explicitly mention the age of the child for whom the book was bought. Out of these 29, 28 fall between the ages of 8 and 24 months, making it, as one reviewer puts it emphatically, a "book for toddlers" ("Laura Link," September 2015).

The development of theory of mind is intertwined with the acquisition of vocabulary, but it's not its simple vocabulary that makes *Pooh's Honey Trouble* "a book for toddlers." Take another look at *Rosie's Walk* (from the section "Age 3–7"). *Rosie's Walk* contains fewer words that either *Curious George at the Zoo* or *Pooh's Honey Trouble,* and, unlike them, it has no explicit references to mental states.[38] Nevertheless it does embed mental states on the third level—via illustrations!—and the reviews on

amazon.com testify to its popularity with parents of preschoolers, with kindergarten teachers, and with beginner readers themselves.[39]

Still, although I am encouraged by early findings about the relative scarcity of third-level embedments in books for 1–2 year olds, I would be cautious about simply concluding that they signal intuitive awareness on the part of authors and caregivers of the stages in the development of theory of mind. For, the excision of complex mental states from such books must also have its own history, bound up with the emergence of what Alan Richardson calls "the children's book industry," which in England, for instance, goes back to at least 1744.[40] Elsewhere, I have looked at an eighteenth-century text specifically geared toward three-to-five year olds, Anna Laetitia Barbauld's *Hymns in Prose for Children* (1781),[41] but I don't want to conclude too much based on just one case study.

Complicating the issue even further are the recent experiments of cognitive scientists which demonstrate some awareness of false beliefs in 15-month-olds. Given these experiments, one would think that it may be good for a one-year old, now and then, to hear a story that is "above her head"—that is, a story that embeds mental states on the third level—especially if her parents make a point of talking with her about the characters' thoughts and feelings. Benefits of this practice are borne out by research of developmental psychologist Paul L. Harris and his colleagues, who have shown that parents "who talk about psychological themes promote their children's mental state understanding," especially, when their elucidation of mental states "is not tied to particular lexical terms or syntactic constructions . . . [reflecting, instead] a wide-ranging sensitivity to individual perspectives and [nurturing] the same sensitivity in children" (71–72).[42] Of course, to extrapolate from Peskin and Astington's study, there may be a delicate balance between letting a toddler *infer* implied mental states of characters in a children's book and *talking* to her about those mental states. This, moreover, is the point at which our current state of knowledge makes me cautious about speculating any further, calling (predictably) for more research into historical and cognitive-developmental aspects of embedment in stories for toddlers.

Crossovers

It's fitting to conclude this section with a discussion of crossovers,[43] books that appeal to toddlers *and* to their parents, such as Marla Frazee's *Hush, Little Baby*. The "story" told by this board book is an old folksong, "Hush little baby, don't say a word," transcribed verbatim. There are no third-level embedments in the song. In fact, there are no references to mental states at all, although we may come up with a couple of implied embedments, such as, papa and mama are *willing* to buy anything to make their baby *happy* ("If that billy goat don't pull, / Papa's gonna buy you a cart and a bull"), and papa and mama *love* the baby ("If that horse and cart fall down, / You'll still be the sweetest little baby in town").

Frazee's illustrations, however, tell a different story. Its protagonist is an older sister, who is about eight and jealous of the attention that the new baby gets. So when the baby's peacefully asleep and the parents are looking the other way, the girl pushes the

cradle roughly. The baby wakes up screaming, and the girl pretends to be concerned and eager to calm it down ("Hush, little baby, don't say a word"), while the startled and bleary-eyed parents look on. The girl then convinces the father that they should go visit a village peddler, because a mockingbird in a cage would surely console the baby. Frazee's drawings seem to imply that the girl has wanted the bird for some time and that she is thrilled to get some time alone with her daddy. And so it goes. The baby keeps crying, while the older sister keeps accumulating one treasure after another (a diamond ring, a looking glass, a puppy), delighted by her important role in the common project of calming down the baby, and in fact, gradually warming up to the little interloper.

There are numerous third-level embedments in the story told by the pictures. At first, we are encouraged to think that the parents don't suspect that the girl is jealous, just as they don't suspect that she only wants them to think that these toys are for the baby while, in reality, they are for her. But toward the end of the narrative we begin to wonder if the parents are indeed as clueless as the girl thinks they are. In fact, when she gets the puppy, the father's facial expression seems to imply that he has understood all along more than his daughter thought he did. His glance breaks the fourth wall and draws us in: He wants us to know that he knows what's going on. (Or, given that the narrative thus foregrounds the relationship between the implied reader and the implied author, another way to map out this scene would be to say that *Frazee* wants us to know that the father knows what's going on.)

Lipson (48) as well as amazon.com[44] put the age of the reader for *Hush, Little Baby* at two-three years old, which is reasonable, given that the original folksong has no third-level embedments. Freeman (236), Gillespie (712), and scholastic.com,[45] however, estimate the age of the reader as PreK–2. The difference between two-three and PreK–2 appears striking unless we assume that Freeman, Gillespie, and scholastic.com respond to the story told by the book's illustrations. The level of embedment in that story, indeed, makes it appropriate for readers who can appreciate the first- and
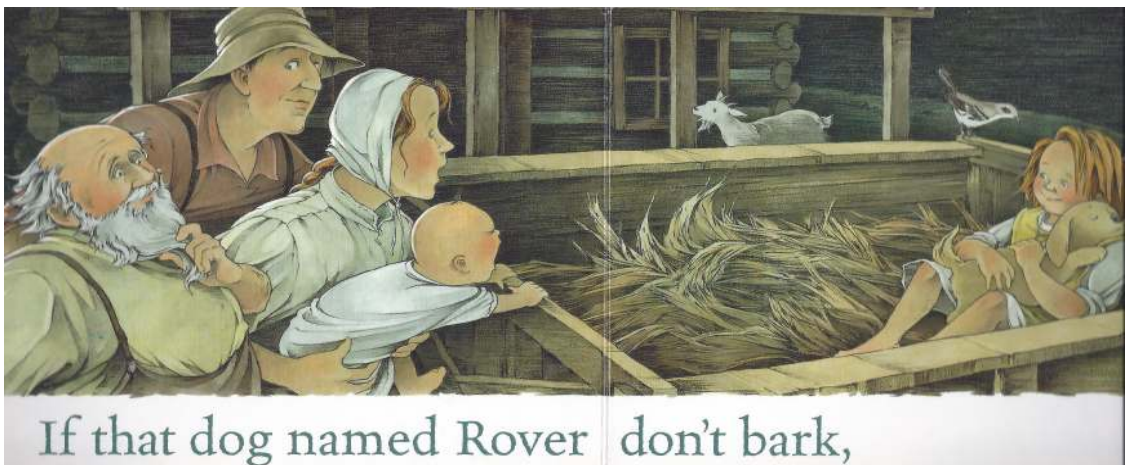

Figure 1. "If that dog named Rover don't bark." Franzee, Marla. *Hush, Little Baby: A Folk Song with Pictures Board Book.*

even second-order false beliefs, that is, for four to seven year olds. Moreover, responses accumulated on amazon.com show that parents and grandparents are intuitively aware that Frazee's book contains two stories under one cover, one geared (we can say) toward a more mature theory of mind, and another, toward a theory of mind early-in-development."[46]

What I have hoped to show throughout my essay is that embedded mental states are richly present not just in "grownup" fiction but also in children's literature, and that a critical inquiry into patterns of embedment in children's literature draws on close reading, cultural-historicist analysis, research in cognitive science, and even some occasional digital data mining. As such it makes a practitioner of the cognitive approach to literary criticism accountable to several different fields and, moreover, aware of the provisional state of her conclusions. This may imply more uncertainty than our discipline is used to, but, then, one doesn't turn to interdisciplinary work seeking certainty and familiarity.

Endnotes

1. For a review, see Apperly.

2. See Saxe 2010 and 2013; Saze and Kanwisher; Saxe and Powell; Li et al.

3. See Zunshine, "From the Social," "The Commotion."

4. On the difference between the effect on theory of mind of reading fiction and expository nonfiction, see Mar et al.

5. Zunshine, "The Commotion"; Whalen et al. 2015.

6. See Zunshine, "I Lie."

7. Over the years, literary scholars have suggested several others. See, for instance, Miall, "Science" and Richardson, "Studies."

8. Rosenberg, *How History*.

9. See Zunshine, "The Commotion" and "Secret Life."

10. Email communication, April 23, 2018.

11. Zunshine, "Style."

12. I addressed this issue briefly in "Style Brings in Mental States"; most recently it has been investigated by social psychologists studying the effects of reading fiction on theory of mind. See Kidd and Castano.

13. See also Zwaan and Van Gilder.

14. See Van Dujin et al., Vermeule, Lee, and Zunshine, "The Secret Life."

15. Although scholastic.com is by no means immune to the charge of being "primarily a marketing device" (Dyer et al. 22), it is a resource widely used by parents and teachers. As long as one is aware of its limitations, it's is a good starting point for a conversation about the reading "interest levels."

16. See Crane, "Cognitive Historicism."

17. See Cook, Crane's *Shakespeare's Brain,* Phillips, Spolsky, Tribble, Richardson, and Zunshine, "Bakhtin."

18. See Nikolajeva, "Penguin" and "Reading"; Kümmerling-Meibauer, "Emotional," "Metalinguistic," "Emergent," 7; and Rau.

19. Apperly, 11–34. See also Miligan et al.

20. See also Mascaro and Molin;Mascaro and Sperber.

21. See Mercier and Sperber, 94–96.

22. Saxe, "The New Puzzle," 110, and Apperly, 108–81.

23. See Zunshine, "The Commotion."

24. Zunshine, "The Secret Life," 729.

25. On the processing of high-level embedments, see Dunbar 180.

26. Zunshine, "The Commotion," 139.

27. Another fascinating outlier, similarly classed with children's literature, yet embedding complex mental states at a frequency we would associate with literature for adults, is J. M. Barrie's *Peter Pan.* For an insightful discussion of the "labyrinth of subjectivities" (133) of its various textual incarnations, see George Butte, *Suture and Narrative* (particularly, chapter 4, "The Wounds of Peter Pan"). Although Butte does not deal with embedded mental states per se, his analysis of Barrie's texts as speaking "to several audiences in several registers at the same time" (136) reveals proliferation of complex embedments.

28. As one anonymous amazon.com purchaser puts it, "Although there are wonderful little snippets of family life, and a few hints of the conflicts between the feisty Laura and her more reserved and perfect sister Mary, the truth is, there isn't much of a plot here" (https://www.amazon.com/Little-House-Woods-Ingalls-Wilder/dp/0060581808/ref=sr_1_1?s=books&ie=UT-F8&qid=1475604634&sr=1–1&keywords=little+house+in+the+big+woods) (accessed October 4, 2017).

29. Compare to Kümmerling-Meibauer's classic argument that "most of the key elements of sophisticated narratives are present in a simpler form in picture books" ("Metalinguistic," 177).

30. For a discussion of "pleasure" involved in children's interaction with twist endings, see Bellorín and Silva-Díaz "Surprised," 118.

31. And, of course, as Alexandra Berlina helpfully reminds me, they also *know* that the mouse is *surprised* that the Gruffalo, the monster that the mouse *thinks* she has invented, turns out to exist!

32. For a valuable review of problems inherent in the issue of identification, see Keen, *Empathy and the Novel.*

33. This view is compatible with one advanced by social psychologists Kidd and Castano, who, building on the Brechtian notion of alienation, suggest that in works of literary fiction, readers may observe characters "with the aim of understanding their situation," and, if so, "their emotional identification with characters . . . and their interest in them may be orthogonal, or even negatively related." Without going as far as to characterize *This Is Not My Hat* as literary fiction, I nevertheless want to keep the possibility of this "orthogonal" interest in characters on the table even for young readers.

34. As Milligan et al. point out, age itself is not an "explanatory variable, but rather a proxy for various maturational factors that may explain variation, an important one of which is language ability" (638).

35. For a review, see Ahrens.

36.　See Kümmerling-Meibauer and Meibauer.

37.　The number of reviews is growing, so by the time this essay is in review, it will be higher.

38.　As Kümmerling-Meibauer observes, the "text in Hutchins's book merely informs the reader in a few words about Rosie's walk and is supplemented only by participial constructions with changing place names. . . . The completely dull [text relates] events with almost no mention of the emotional reactions of those who participate in them" ("Metalinguistic," 170).

39.　https://www.amazon.com/Rosies-Walk-Pat-Hutchins/dp/0020437501/ref=sr_1_1?s=-books&ie=UTF8&qid=1477417845&sr=1-1&keywords=rosie%27s+walk

40.　Richardson, *Literature,* 109; see also Deppner 58–59.

41.　Zunshine, *Strange Concepts,* ch. 14.

42.　See also de Rosnay, Pons, Harris, and Morrell; Hughes, White, and Ensor.

43.　On the relationship between cross-writing and crossovers, see Falconer.

44.　https://www.amazon.com/Hush-Little-Baby-Folk-Pictures/dp/0152058877/ref=sr_1_1?s=-books&ie=UTF8&qid=1535232923&sr=1-1&keywords=hush+little+baby+marla+frazee

45.　https://www.scholastic.com/teachers/books/hush-little-baby-by-marla-frazee/

46.　https://www.amazon.com/Hush-Little-Baby-Folk-Pictures/product-reviews/0152058877/ref=cm_cr_getr_d_paging_btm_4?ie=UTF8&reviewerType=all_reviews&showView-points=1&sortBy=recent&pageNumber=4

Works Cited

Anonymous. *The Epic of Gilgamesh.* Translated and Edited by Benjamin R. Foster. New York: Norton, 2001.

Ahrens, Kathleen. "Picturebooks: Where Literature Appreciation Begins." In *Emergent Literary: Children's Books from 0 to 3,* edited by Bettina Kümmerling-Meibauer, 77–89. Amsterdam: John Benjamins Publishing Company, 2011.

Apperly, Ian. *The Cognitive Basis of "Theory of Mind."* New York: Psychology Press, 2011.

Astington, Janet Wilde, Janette Pelletier, and Bruce Homer. "Theory of Mind and Epistemological Development: The Relation between Children's Second-order False-belief Understanding and Their Ability to Reason about Evidence." *New Ideas in Psychology* 20 (2002): 131–44.

Beckett, Sandra. "Parodic Play with Paintings in Picture Books." *Children's Literature* 29 (2001): 175–95.

Bellorín Brenda, and Cecilia Silva-Díaz. "Twist Endings in Narrative Picturebooks." In *New Directions in Picturebook Research,* edited by Teresa Colomer, Bettina Kümmerling-Meibauer, and Cecilia Silva-Díaz, 113–27. New York: Routledge, 2010.

Burnett, Frances Hodgson. *The Annotated Secret Garden.* Edited by Gretchen Holbrook Gerzina. New York: W. W. Norton & Company, 2007.

Butte, George. *Suture and Narrative: Deep Intersubjectivity in Fiction and Film.* Columbus: The Ohio State Univ. Press, 2017.

Carroll, Lewis. *Alice's Adventures in Wonderland.* London: Usborne Publishing, 2013.

Carruthers, Peter. "Two Systems for Mindreading?" *Review of Philosophy and Psychology* 7.1 (2016): 141–62.

Cave, Terence. *Thinking with Literature: Towards a Cognitive Criticism.* Oxford, UK: Oxford Univ. Press, 2016.

Clark, Beverly Lyon. *Kiddie Lit: The Cultural Construction of Children's Literature in America.* Baltimore: The Johns Hopkins Univ. Press, 2003.

Clemens, Samuel L., and William D. Howells. *Mark Twain-Howells Letters: The Correspondence of Samuel L. Clemens and William D. Howells, 1872–1910.* Edited by Henry Nash Smith and William M. Gibson. Cambridge, MA: Harvard Univ. Press, 1960.

Cook, Amy. *Shakespearean Neuroplay: Reinvigorating the Study of Dramatic Texts and Performance through Cognitive Science.* Palgrave Macmillan, 2010.

Crane, Mary Thomas. *Shakespeare's Brain: Reading with Cognitive Theory.* Princeton Univ. Press, 2001.

——. "Cognitive Historicism: Intuition in Early Modern Thought." In *The Oxford Handbook of Cognitive Literary Studies,* edited by Lisa Zunshine, 18–33. New York: Oxford Univ. Press, 2015.

Deppner, Martin Roman. "Parallel Receptions of the Fundamental: Basic Designs in Picturebooks and Modern Art." In *Emergent Literary: Children's Books from 0 to 3,* edited by Bettina Kümmerling-Meibauer, 55–74. Amsterdam: John Benjamins Publishing Company, 2011.

De Rosnay, Marc, Francisco Pons, Paul L. Harris, and Julian M. B. Morrell. "A Lag between Understanding False Belief and Emotion Attribution in Young Children: Relationships with Linguistic Ability and Mothers' Mental State Language." *British Journal of Developmental Psychology* 22 (2004): 197–218.

Dunbar, Robin. *How Many Friends Does One Person Need: Dunbar's Number and Other Evolutionary Quirks.* London: Faber and Faber, 2010.

Dyer, Jennifer R., Marilyn Shatz, and Henry M Wellman. "Young children's storybooks as a source of mental state information." *Cognitive Development* 15.1 (2000): 17–37.

Falconer, Rachel. "Children's literature: Part II. Forms and genres. 43. Crossover literature." http://schoolbag.info/literature/children/140.html (accessed on July 20, 2017).

Fellman, Anita Clair. *Little House, Long Shadow: Laura Ingalls Wilder's Impact on American Culture.* Columbia: Univ. of Missouri Press, 2008.

Frazee, Marla. *Hush, Little Baby: A Folk Song with Pictures Board Book.* New York: Houghton Mifflin Harcourt, 2007.

Freeman, Judy. *Books Kids Will Sit Still For 3: A Read-Aloud Guide.* Children's and Young Adult Literature Reference Series. Volume 3. Westport, CT: Libraries Unlimited, 2006.

Gavaler, Chris and Dan Johnson. "The Genre Effect: A Science Fiction (vs. Realism) Manipulation Decreases Inference Effort, Reading Comprehension, and Perceptions of Literary Merit." *Scientific Study of Literature* 7.1 (2017): 79–108.

Gillespie, John T. *Best Books for Children: Preschool through Grade Six.* Wetsport, CT and London: Libraries Unlimited, 2002.

Harris, Paul L., Marc de Rosnay, and Francisco Pons. "Language and Children's Understanding of Mental States." *Current Directions in Psychological Science* 14.2 (2005): 69–73.

Hughes, Claire, Naomi White, and Rosie Ensor. "How Does Talking about Thoughts, Desires, and Feelings Foster Children's Socio-cognitive Development? Mediators, Moderators and Implications for Intervention." In *Children and Emotion: New Insights into Developmental Affective Science,* edited by Kristin Hansen Lagattuta, 95–105. Basel: Karger, 2014.

Jansson, Tove. *Moomin Falls in Love.* Montreal: Enfant, 2013.

Keane, Webb. *Ethical Life: Its Natural and Social Histories.* Princeton: Princeton University Press, 2016.

Keen, Suzanne. *Empathy and the Novel.* New York: Oxford Univ. Press, 2007.

Kidd, David Comer, and Emanuele Castano. "Reading Literary Fiction Affects Theory of Mind: Three Pre-registered Replications and Extensions of Kidd and Castano (2013)." *Social Psychological and Personality Science* June 20, 2018.

Kinney, Jeff. *Diary of a Wimpy Kid: Rodrick Rules.* New York: Amulet Books, 2008.

Knoepflmacher, U. C., and Mitzi Myers. "From the Editors: 'Cross-Writing' and the Reconceptualizing of Children's Literary Studies." *Children's Literature* 25 (1997): vii-xvi.

Kümmerling-Meibauer, Bettina. "Emotional Connection: Representation of Emotions in Young Adult Literature." In *Contemporary Adolescent Literature and Culture: The Emergent Adult,* edited by Mary Hilton and Maria Nikolajeva, 127–38. New York: Ashgate, 2012.

——. "Emergent Literacy and Children's Literature." In *Emergent Literary: Children's Books from 0 to 3,* edited byBettina Kümmerling-Meibauer, 1–14. Amsterdam: John Benjamins Publishing Company, 2011.

——."Metalinguistic Awareness and the Child's Developing Concept of Irony: The Relationship between Pictures and Text in Ironic Picture Books." *The Lion and the Unicorn* 23.2 (April 1999): 157–83.

Kümmerling-Meibauer, Bettina, and Jörg Meibauer. "Early-Concept Books: Acquiring Nominal and Verbal Concepts." In *Emergent Literary: Children's Books from 0 to 3,* edited by Bettina Kümmerling-Meibauer, 91–114. Amsterdam: John Benjamins Publishing Company, 2011.

Lee, Haiyan. "Measuring the Stomach of a Gentleman with the Heart-Mind of a Pipsqueak: On the Ubiquity and Utility of Theory of Mind in Literature, Mostly." MLA 2018, New York.

Li, Wanqing, Xiaoqin Mai, and Chao Liu, "The Default Mode Network and Social Understanding of Others: What Do Brain Connectivity Studies Tell Us." *Frontiers in Human Neuroscience* 8:74 (2014).

Lipson, Eden Ross. *The New York Times Parent's Guide to the Best Books for Children.* New York: Three Rivers Press, 2000.

Mar, Raymond A., Keith Oatley, Jacob Hirsh, Jennifer dela Paz, Jordan B. Peterson. "Bookworms versus Nerds: Exposure to Fiction versus Non-fiction, Divergent Associations with Social Ability, and the Simulation of Fictional Social Worlds." *Journal of Research in Personality* 40 (2006): 694–712.

Mascaro, Olivier, and Olivier Molin. "Gullible's Travel: How Honest and Trustful Children Become Vigilant Communicators." In *Trust and Skepticism: Children's Selective Learning from Testimony,* edited by Elizabeth J. Robinson and Shiri Einav, 69–82. London: Psychology Press, 2014.

Mascaro, Olivier, and Dan Sperber. "The Moral, Epistemic, and Mindreading Components of Children's Vigilance towards Deception." *Cognition* 112 (2009): 367–80.

Mercier, Hugo, and Dan Sperber. *The Enigma of Reason.* Cambridge, MA: Harvard Univ. Press, 2017.

Miall, David S. "Science in the Perspective of Literariness." *Scientific Study of Literature,* 8 (2011): 8–14.

Miller, Patricia H., Frank S. Kessel, and John H. Flavell. "Thinking about People Thinking about People Thinking about . . . : A Study of Social Cognitive Development Child Development." *Child Development* 41.3 (1970): 613–623.

Milligan, Karen, Astington, Janet Wilde, and Lisa Ain Dack. "Language and Theory of Mind: Meta-analysis of the Relation between Language Ability and False-Belief Understanding." *Child Development* 78.2 (2007): 622–46.

Mumper, Micah L., and Richard J. Gerrig. "How Does Leisure Reading Affect Social Cognitive Abilities?" *Poetics Today* (special issue edited by Nancy Easterlin), forthcoming.

Nikolajeva, Maria. "'The Penguin Looked Sad': Picturebooks, Empathy and Theory of Mind." In *Picturebooks: Representation and Narration,* edited by Bettina Kümmerling-Meibauer, 121–37. New York: Routledge, 2011.

——. "Reading Other People's Minds through Word and Image," *Children's Literature in Education* 43 (2012): 273–91.

Onishi, Kristine H., and Renée Baillargeon. "Do 15-Months-Old Infants Understand False Beliefs?" *Science* 308.5719 (2005): 255–58.

Peskin, Joan, and Janet Wilde Astington. "The Effects of Adding Metacognitive Language to Story Texts." *Cognitive Development* 19 (2004): 253–273.

Phelan, James, and Peter J. Rabinowitz. "Authors, Narrators, Narration." In David Herman, James Phelan, Peter J. Rabinowitz, Brian Richardson, and Robyn Warhol, *Narrative Theory: Core Concepts and Critical Debates,* 29–38. Columbus: The Ohio State Univ. Press, 2012.

——. "Narrative Values, Aesthetic Values." In David Herman, James Phelan, Peter J. Rabinowitz, Brian Richardson, and Robyn Warhol, *Narrative Theory: Core Concepts and Critical Debates,* 160–64. Columbus: The Ohio State Univ. Press, 2012.

Phillips, Natalie M. *Distraction: Problems of Attention in Eighteenth-Century Literature.* Johns Hopkins Univ. Press, 2016.

Rau, Mary Luise. "Metaphors in Picturebooks from 0 to 3." In *Emergent Literary: Children's Books from 0 to 3,* edited by Bettina Kümmerling-Meibauer, 141–59. Amsterdam: John Benjamins Publishing Company, 2011.

Rey, H. A. *Curious George at the Zoo.* New York: Houghton Mifflin Harcourt, 2007.

Rabinowitz, Peter. "Toward a Narratology of Cognitive Flavor." In *The Oxford Handbook of Cognitive Literary Studies,* edited by Lisa Zunshine, 85–103. New York: Oxford Univ. Press, 2015.

Rabinowitz, Peter J. and Corinne Bancroft. "Euclid at the Core: Recentering Literary Education." Style 48.1 (2014): 1–34.

Richardson, Alan. *The Neural Sublime: Cognitive Theories and Romantic Texts.* Johns Hopkins Univ. Press, 2010.

——. *Literature, Education, and Romanticism: Reading as Social Practice, 1780–1832.* Cambridge Univ. Press, 1994.

——. "Studies in Literature and Cognition: A Field Map." In *The Work of Fiction: Cognition, Culture, and Complexity,* edited by Alan Richardson and Ellen Spolsky, 1–29. Aldershot: Ashgate, 2004.

Rosenberg, Alex. *How History Gets Things Wrong: The Neuroscience of Our Addiction to Stories.* MIT Press, 2018.

Saxe, Rebecca. "The Right Temporo-parietal Junction: a Specific Brain Region for Thinking about Thoughts." In *Handbook of Theory of Mind,* edited by Alan Leslie and Tamsin German. London: Taylor and Francis, 2010. http://saxelab.mit.edu/resources/papers/in_press/ Saxe_RTPJChapter.pdf

——. "The New Puzzle of Theory of Mind Development." In *Navigating the Social World: What Infants, Children, and Other Species Can Teach Us,* edited by Mahzarin R. Banaji and Susan A. Gelman, 107–12. New York: Oxford UP, 2013.

Saxe, Rebecca, and Nancy Kanwisher. "People Thinking About Thinking People: The Role of the Temporo-parietal Junction in 'Theory of Mind.'" *NeuroImage 19* (2003): 1835–1842.

Saxe, Rebecca, and L. J. Powell. "It's the Thought that Counts: Specific Brain Regions for One Component of Theory of Mind." *Psychology Science* 17 (2006): 692–99.

Smith Hill, Pamela. "Introduction. 'Will it Come to Anything?': The Story of *Pioneer Girl.*" In *Pioneer Girl: The Annotated Autobiography,* edited by Pamela Smith Hill, xv-lix. Pierre: South Dakota Historical Society Press, 2014.

Spolsky, Ellen. *Satisfying Skepticism: Embodied Knowledge in the Early Modern World.* Burlington, VT: Ashgate, 2001.

Travers, P. L. *The Mary Poppins Omnibus.* London: Lions, 1994.

Tribble, Evelyn B. *Cognition in the Globe: Attention and Memory in Shakespeare's Theatre.* New York: Palgrave Macmillan, 2011.

Twain, Mark. *Mississippi Writings: Tom Sawyer, Life on the Mississippi, Huckleberry Finn, Pudd'nhead Wilson.* New York: Library of America, 1982.

Whalen, D. H., Lisa Zunshine, and Michael Holquist, "Increases in Perspective Embedding Increase Reading Time Even with Typical Text Presentation: Implications for the Reading of Literature." *Frontiers in Psychology* 6:1778 (November 24, 2015). DOI: 10.3389/fpsyg.2015.01778.

Whalen, D. H., Lisa Zunshine, Evelyne Ender, Jason Tougaw, Robert F. Barsky, Peter Steiner, Eugenia Kelbert, and Michael Holquist. "Validating Judgments of Perspective Embedding: Further Explorations of a New Tool for Literary Analysis." *Scientific Study of Literature,* 6.2 (2016): 278–98.

White, E. B. *Stuart Little.* New York: Harper & Row, 1945.

——. *Charlotte's Web.* New York: Harper Collins, 1952.

Wilder, Laura Ingalls. *Little House in the Big Woods.* New York: Scholastic, 1963.

——. *Little House on the Prairie.* New York: Scholastic, 1963.

——. *Little Town on the Prairie.* New York: Scholastic, 1941.

——. *These Happy Golden Years.* New York: Scholastic, 1943.

Van Duijn, Max J., Ineke Sluiter, and Arie Verhagen. "When Narrative Takes Over: The Representation of Embedded Mindstates in Shakespeare's *Othello.*" *Language and Literature* 24. 2 (2015): 148–66.

Van Gilder, Jessica. "What Matters More—The 'Literariness' of a Story, or What a Reader Thinks It Is? Exploring the Influence of Genre Expectations on Transportation and Empathy." MA Thesis. University of Minnesota, May 2017.

Vermeule, Blakey. *Why Do We Care About Literary Characters?* Baltimore: Johns Hopkins Univ. Press, 2010.

Zunshine, Lisa. "Bakhtin, Theory of Mind, and Pedagogy: Cognitive Construction of Social Class." *Eighteenth-Century Fiction* 30.1 (2017): 109–26.

——. "I Lie Therefore I Am." *Approaches to Teaching: The Plum in the Golden Vase,* edited by Andrew Schonebaum. New York: MLA, under review.

——. "The Commotion of Souls." *SubStance*45.2 (2016): 118–42.

——. *Strange Concepts and the Stories They Make Possible: Cognition, Culture, Narrative.* Baltimore: The Johns Hopkins Univ. Press, 2008.

——. "The Secret Life of Fiction," *PMLA* 130.3 (2015): 724–31.

——. "From the Social to the Literary: Approaching Cao Xueqin's *The Story of the Stone* (Honglou meng) from a Cognitive Perspective." In *The Oxford Handbook of Cognitive Literary Studies,* edited by Lisa Zunshine, 176–96. New York: Oxford Univ. Press, 2015.

——. "Style Brings In Mental States: A Response to Alan Palmer's 'Social Minds.'" *Style* 45.2 (2011): 349–56.

Zwaan, Rolf A. "Effect of Genre Expectations on Text Comprehension." *Journal of Experimental Psychology: Learning, Memory, and Cognition* 20. 4 (1994): 920–33.