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What to Expect When You Pick Up a Graphic Novel

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We live in other people's heads: avidly, reluctantly, consciously, unawares, gropingly, inescapably. A stranger sitting across the table at the library turns away from her laptop screen, extends her forearm, and begins to move her eyes from the tip of her index finger to her nose and back. It's a kind of eye calisthenics; she obviously wants to keep her near-sightedness under control. I sigh and look away: I really should do the same exercises, but I am too lazy. When I look at her again, I see that she sees me looking at her, so I let my glance slide past her casually: I don't want her to think that I am staring.

Our daily lives are unimaginable without such constant nonverbal interactions. We explain other people's observable behavior in terms of unobservable mental states and assume that they explain our behavior the same way. Mental states: thoughts, desires, feelings, intentions. She does that exercise because she *wants* to improve her eyesight. I sigh because I *feel bad* about my laziness. I *don't know* what she *thinks* when she *notices* my look, but I *think up* a little narrative about what she *might think* and what I should do so that she *doesn't think* this. Note that to describe this for you now I construct a neat sequence of sentences, making it seem like an evenly paced, conscious, and fully verbalized process, but when it was actually happening it was fast, messy, intuitive, not particularly conscious, and certainly not verbalized.

We've been doing this daily for hundreds of thousands of years. (Nightly too: we attribute intentions to creatures populating our dreams.) Psychologists have a special term for the evolved cognitive adaptation that makes us see behavior as caused by underlying mental states. They call it theory of mind, also known as folk psychology and mind-reading. The latter term is particularly inapt. Given how many of our attributions and interpretations of thoughts and feelings are wrong or only approximately correct, they might as well call it mind-misreading. But since evolution doesn't deal in perfection, we have to fumble through by "reading minds" as well as we can. Because when we can't do it—that is, when the cognitive architecture that makes an automatic attribution of mental states possible

is impaired, as it appears to be with autism spectrum condition—we are faced with social challenges of a different order of magnitude.¹

In the last five years, theory of mind has become a major research topic among cognitive, developmental, comparative and social psychologists, as well as cognitive neuroscientists.² Though everything they learn opens up more questions and will remain the subject of debates for years to come, theory of mind is increasingly thought of as a crucial cognitive endowment of our species—a cornerstone of imagination, pretense, morality, and language, indeed of every aspect of human sociality.

The emphasis on the social aspect of mind-reading is central to the argument of this essay. I suggest that graphic narratives build on theory-of-mind adaptations to offer their readers a pleasurable exercise in navigating complex social situations. I also suggest that these narratives use a variety of visual cues to signal to their readers what levels of mind-reading complexity—I call it sociocognitive complexity—they may expect when they pick up a particular graphic novel or memoir.

The overarching claim of my essay is that all narrative-oriented cultural representations, such as fiction, movies, plays, team sports broadcasts, as well as some forms of art, singing, and dance, reflect the workings of our theory of mind. This means that we can understand better how specific representations, such as graphic narratives, affect us if we ask how they engage our theory of mind. I lay out this larger claim in the first part, in which I invite you to imagine what our culture would be like if our theory-of-mind adaptations were magically turned off. The second part elaborates the concept of sociocognitive complexity with a particular emphasis on the pleasure we derive from attributing minds to fictional characters. The third part deals with three graphic narratives, Nancy Butler's *Pride and Prejudice* (an adaptation of the 1813 novel by Jane Austen), Art Spiegelman's *In the Shadow of No Towers*, and Alison Bechdel's *Fun Home: A Family Tragicomic*. I suggest here that when we discuss the target audience for a given graphic narrative, we are talking to a large extent about that narrative's sociocognitive complexity, and how the cultural packaging of this complexity may be a factor in attracting relatively well-defined groups of readers. I conclude by addressing the significance of sociocognitive complexity for graphic memoirs in light of recent research by cognitive psychologists studying theory of mind and fiction.

Culture of Greedy Mind-Readers

Our adaptations for mind reading are promiscuous, voracious, and proactive. They attribute mental states, therefore they are. That is, their very way of being is a constant stimulation delivered either by actual or by imaginary interactions with others. As evolutionary psychologist

Jesse M. Bering puts it, after a certain age neurotypical (i.e., non-autistic) individuals “cannot turn off their mind-reading skills even if they want to. All human actions are forevermore perceived to be the products of unobservable mental states, and every behavior, therefore, is subject to intense sociocognitive scrutiny” (12).

To grasp the broader cultural impact of mind-reading, let’s start on a personal level. Talking to my friend and following her train of thoughts offers the most immediate input for my theory of mind. So too, when she is away, does imagining what she might be thinking at this moment. So too, if she dies, does imagining what she would have thought on such and such occasion.

I want more, however. I want to hear stories about what other people did and what they looked like when they did it so that I can imagine what they thought and felt at those times. Those people can be members of my family, or complete strangers, or people that never existed. They don’t even have to be human: androids, talking animals, dancing candelabras, and twinkling stars will do. I can listen to such stories; I can read them; I can hear them sung; I can watch them danced, or mimed, or projected on a flat surface; I can look at them carved into stone, painted on walls, or reproduced in art books. Because I want to see bodies in action so that I can think about their intentions, sometimes I make up those stories myself in whatever way I can: painting, dancing, singing, or writing. In my particular case, this may involve writing about what fictional characters, their creators, and other scholars might have meant when they did this or said that. Literary critics make a living by reading and misreading minds.

I am talking about myself here. Now think: if every human being on Earth has the same need to process mental states, what kind of culture must emerge in response to this need? This culture has to continuously feed this need, yet it will never be able to fully satisfy it since new mind-reading cravings arise all the time. It is a *culture of greedy mind readers* (bound to become even greedier with the advent of a media-saturated society, as new modes of storytelling seem to appear constantly). Case in point: five years ago, I could not foresee that today I would need to read a particular blog regularly. Back then I didn’t even know what blogging was. And now I am addicted to this blogger’s way of thinking: I crave my daily fix of her mental states.

Here are some phenomena that one may encounter in a culture of greedy mind-readers: stories that depict people’s response to their perception of other minds (novels); arrangements that let us read mental states into sequences of movements set to music (ballet); specially designated social spaces in which we can appreciate the gap between what people feel and what they would feel had they known as much about their real situation as we do (theatre); events during which numerous physical bod-

ies form complex patterns guided by the shared understanding of intentions (team sports); and artifacts that coordinate text and images so that the information about people's feelings that we get from looking at their body language elaborates, contradicts, or otherwise complicates the verbal descriptions of their feelings (graphic narratives). There is no predicting what forms such phenomena will take in a concrete historical moment in a particular society, or how popular they will be (e.g., will people spend more time playing videogames than going to theatres?). However, we can predict that no narrative-based cultural form will endure unless it lets us attribute mental states to somebody or something.

Imagine the impossible: our theory of mind is switched off. How many cultural institutions that let us read minds into behavior would survive? Who would attend bullfighting, pantomime, basketball games, opera, finger-shadows theatre, or tightrope walking? If you doubt that tightrope walking engages our theory of mind, consider this: We *know* that the performer *does not want* to die and that she *knows* that what she is doing is dangerous; moreover, she *knows* that we *know* that she *knows* that what she is doing is dangerous. That's why a performer sometimes pretends to slip and nearly fall down, eliciting a collective "ahh" from her audience below. She is playing with our minds, making us imagine what she must feel as she narrowly escapes death. Take this unconscious attribution of mental states out of the act of tightrope walking, and see whether there is any interest left in that act. In fact, drained of all mind-reading, tightrope walking is exactly as interesting as a wheel-o toy rolling back and forth on its magnetic axle.

Just so, watching a basketball game without attributing intentions to the players is as enticing as watching falling snowflakes—both are random movements, interesting for about two minutes, and then your mind wanders off. Opera is a pain: bodies moving haphazardly on stage, bursting into song at random intervals. Finger shadows: why is that woman moving her hands this way? With our theory of mind intact, we say it's because she *wants* to imitate the movement of a dog's tail—she *wants* to *amuse* us. But without theory of mind, her random twitching and twisting of hands seems incomprehensible, unsettling, perhaps threatening.

Now think about the fate of social, political, and economic networks built around a variety of orally transmitted narratives, public rituals, novels, movies, plays, cartoons, news reports, sporting events, online discussions, and, more fundamentally, our everyday conversations about people's plans, thoughts, and feelings. These networks would crumble because they are only sustained by our ability and need to read mental states into behavior. And once the networks of the culture of greedy mind-readers are gone, what's left?

What is Sociocognitive Complexity?

I had an interesting email exchange earlier this year, with a man who has learned about my work on theory of mind and fiction and wanted to share his experience as a father of a child with Asperger Syndrome (i.e., a high-functioning autism spectrum condition). The boy, the father wrote,

although extremely intelligent and possessing an almost photographic memory, resists reading unless it is something related to a special interest of his. We have long known of his difficulty with “stepping into the shoes” of another person and interpreting social clues and nuances. I believe that the difficulty extends to “reading the mind” of others, as we found out when he was very young, by trying the old experiment where you hide an item under one of three cups in front of the child and a favorite figure or doll. You then remove the figure and with the child watching, change the location of the object. When you bring back the figure and ask the child “where do you think Mr. X (the figure) would look for the object,” you are testing their ability to communicate not what they have just seen you do, but what Mr. X would believe—that the figure remained in its original location. This is something our son frequently had difficulty with. If this inability to substitute one’s own cognitive process for another’s is consistent, it is likely that reading fiction, especially literature with complicated, interwoven plot lines, would be frustrating, if not a voyage through totally unfamiliar territory.

The father’s observations made absolute sense in light of what developmental psychologists are finding about reading preferences of individuals with autism spectrum condition (ASC). Reading fiction is an activity that calls for attribution of mental states, and as such it is challenging to people with ASC. For example, ongoing research by Jennifer Barnes and colleagues shows that neurotypical individuals strongly prefer narratives about people to narratives about objects, and that the few of them who do prefer narratives about objects, favor fictional narratives about objects (which may call for attribution of mental states to the author) over encyclopedia entries. Both of these preferences are reversed in individuals with Asperger Syndrome. First, they prefer narratives about objects to narratives about people (the latter featuring social content and thus requiring mind-reading). Second, they prefer “encyclopedia entries, which generally involve very little interaction with the author, to fictional narratives about objects, which might require more.”³

But as we continued our email conversation, the boy’s father said something that I found particularly illuminating given my interest in the sociocognitive complexity of fiction. In response to my suggestion that perhaps his son might enjoy reading novels that emphasize factual information, say, Defoe’s *Robinson Crusoe*, he wrote:

I have tried *Robinson Crusoe* and *Treasure Island* with no success thus far. He will read such things as background books on Marvel comics or Star Wars, not the comics themselves, however. He retains the facts

like a sponge. He also has an uncanny ability to remember credits from his favorite television shows. He can name the actors doing voice-over parts on shows and remarks when they work on other shows he enjoys.

Now it so happens that over the last two years, I've been having an on-and-off discussion about *Robinson Crusoe* with a friend of mine. He maintains that we don't read novels *only* for mental states: some of them we enjoy because they contain useful information. *Robinson Crusoe*, with its emphasis on how-to kinds of knowledge is an example of the latter. It's an ultimate boy fantasy, a survival kit. No chick-flickish "I wonder how she feels about my feelings about him" on that desert island: just the facts, ma'am.

I've been disagreeing, of course. "Novel reading is mind-reading" (Palmer 182), and the intensely introspective *Robinson Crusoe* is theory of mind writ large. Still, I must have been influenced by my friend's argument to some degree because in suggesting this novel to my email correspondent, I thought that perhaps a reader with the Asperger's would appreciate its factual and how-to aspects even if he didn't enjoy following the protagonist's thoughts and feelings. Skip, say, Crusoe's religious and philosophical musings and focus on various factual descriptions, e.g., how to build a raft.

But, as it turns out, what we consider Defoe's factual descriptions are still shot through with mental states to such a degree as to make the information and how-to aspects of it irrelevant.⁴ The boy who likes reading such things as "background books on Marvel comics or Star Wars, not the comics themselves," seems to be a better intuitive judge of this than we are. We are so taken by the factual information contained in the novel that we may not notice the mental states that give meaning to this factual information. But when that meaning is not there—as seems to be the experience of the young reader who "retains facts like a sponge" *when they can stand on their own*—the facts are not there either. Drained of mental states, the narrative collapses, all its useful facts and how-to tips notwithstanding.

Robinson Crusoe is thus perfect for introducing the concept of sociocognitive complexity precisely because it may strike some readers as a counterintuitive case for such complexity. I define sociocognitive complexity as the depiction of a mental state embedded within another mental state. "I am sad" is less sociocognitively complex than "He knew she was sad," which in turn is less complex than "Surprisingly, he knew that she was sad," because "surprisingly" implies someone else's mind—perhaps the narrator's?—contemplating a mental state of one character who is aware of the mental state of another character. These examples are crude but they give you a general idea of what I mean when I say that a succes-

sion of scenes featuring third-level complexity—a mind within a mind within a mind, as in the above case of “Surprisingly, he knew . . .”—is the baseline for fiction. Some authors/genres/works routinely operate on the fourth level, and some reach to the fifth and even sixth levels. In contrast, encyclopedia entries never rise to the third level, unless they deal with subjects that come with their own higher sociocognitive complexity (e.g., a Wikipedia entry featuring the plot synopsis of a novel or a movie).

Robinson Crusoe, in spite of its preoccupation with factual information, operates on the third level of mental embedment, occasionally reaching to the fourth and fifth levels. Moreover, it does this by representing the mental states of just one person. This is important because when people first hear of three embedded mental states as the baseline for sociocognitive complexity in fiction, they assume that it must mean three characters, which is not necessarily the case.

Thus Crusoe:

From this moment I began to conclude in my mind that it was possible for me to be more happy in this forsaken, solitary condition than it was probable I should ever have been in any other particular state in the world; and with this thought I was going to give thanks to God for bringing me to this place. I know not what it was, but something shocked my mind at that thought, and I durst not speak the words. “How canst thou become such a hypocrite,” said I, even audibly, “to pretend to be thankful for a condition which, however thou mayest endeavour to be contented with, thou wouldst rather pray heartily to be delivered from?” (97)

If we map out the levels of mental embedment in this last part, we get something along the lines of: “Crusoe is *shocked* to realize that he would *deceive* himself into *believing* that he could be *thankful* for being in a situation that, even as he *wants to think* the best of it, he would still strongly *prefer* to escape.” This is the fifth level of mental embedment (seventh by a more generous count, but I prefer conservative counts). Defoe’s novel thus vividly demonstrates that writers do not need multiple characters to create multiple levels of embedment. High sociocognitive complexity can be achieved by having a single character (indeed, one placed on a desert island!) reflecting on his own states of mind.

I have so far discussed sociocognitive complexity as present in written narratives, such as works of fiction and encyclopedia entries. Representations that rely on visual perception, such as movies, plays, and graphic narratives, also cultivate sociocognitive complexity, using methods specific to each medium. Hence in the next section, I focus on sociocognitive complexity in graphic novels and autobiographies. However, before we abandon “non-graphic” narratives, let me recap the underlying assumptions of my analysis. These assumptions have originated in the cognitive study of fiction⁵ but they provide a foundation for what I am about to say about graphic storytelling:

- Theory of mind evolved to track mental states involved in real-life social interactions.
- On some level, however, our theory-of-mind adaptations do not distinguish between the mental states of real people and of fictional characters.
- Fiction, thus, feeds our theory of mind, giving us carefully crafted, emotionally and aesthetically compelling social contexts shot through with mind-reading opportunities.
- Hence the pleasure afforded by following minds in fictional narratives is to a significant degree a *social* pleasure. It's an illusory but satisfying confirmation that we remain competent players in the social game that is our life.
- Works of fiction cultivate sociocognitive complexity by representing mental states embedded within mental states. Three embedded mental states—though not necessarily three characters—constitute the baseline for sociocognitive complexity in fiction. No fictional narrative can function on a lower level of sociocognitive complexity.⁶

How Graphic Narratives Choose Their Readers

How do graphic narratives represent sociocognitive complexity? There is no answering this question in a single essay, but I hope to clarify some of the relevant issues by looking at Butler's adaptation of *Pride and Prejudice* for Marvel Comics (2009; illustrations by Hugo Petrus; cover by Sonny Liew), Spiegelman's *In the Shadow of No Towers* (2004), and Bechdel's *Fun Home* (2007).

Butler's *Pride and Prejudice* contains a generous sampling of third-level mental embeddings on every page but hardly any fourth-level embeddings.⁷ There are also some second-level embeddings that appear striking once you realize to what scenes they correspond in the original novel. For instance, when Elizabeth Bennet comes to visit Pemberley on the invitation of Mr. Darcy and his sister and encounters Miss Bingley, Miss Bingley welcomes her by observing: "I understand, Miss Bennet, that the militia have left Meryton. They must be a great loss to your family," to which Elizabeth replies light-heartedly: "We are recovering tolerably" (Figure 1). From the context of the panel, it appears that nobody else can



Fig 1. Panel from Nancy Butler and Hugo Petrus, *Pride and Prejudice*. MARVEL Illustrated, 2009. Used with permission.

hear this exchange; neither Georgiana Darcy nor Mr. Darcy are in the picture, so to speak (Figure 2). All that seems to be going on is that Miss Bingley is being catty in implying that the Bennet girls run after army officers, and Elizabeth is ignoring her cattiness. If we map out this scene in terms of its embedded mental states, we get a second-level embedment with Miss Bingley at its apex: "Miss Bingley wants Elizabeth to feel bad." Elizabeth, cheerfully indifferent, doesn't seem to entertain any complex thoughts or feelings.

In contrast, in Austen's novel, Miss Bingley's remark sets off a complicated process of mind-reading involving four people. Increasingly jealous of Elizabeth and Mr. Darcy and finally unable to contain her jealousy, Miss Bingley takes "the first opportunity of saying, with sneering civility":

'Pray, Miss Eliza, are not the ——shire Militia removed from Meryton? They must be a great loss to *your* family.'

In Darcy's presence she dared not mention Wickham's name; but Elizabeth instantly comprehended that he was uppermost in her thoughts; and the various recollections connected with him gave her a moment's distress; but exerting herself vigorously to repel the ill-natured attack, she presently answered the question in a tolerably detached tone. While she spoke, an involuntary glance showed her Darcy, with a heightened complexion, earnestly looking at her, and his sister overcome with confusion, and unable to lift up her eyes. Had Miss Bingley known what pain she was then giving her beloved friend, she undoubtedly would have refrained from the hint; but she had merely intended to discompose Elizabeth by bringing forward the idea of a man to whom she believed her partial, to make her betray a sensibility which might injure her in Darcy's opinion, and, perhaps, to remind the latter of all the follies and absurdities by which some part of her family were connected with that corps. (204)

If we map this out in terms of embedded mental states, we get a series of fourth-level embedments, such as: "Elizabeth is aware that Miss Bingley wants Mr. Darcy to think of Elizabeth's feelings about Mr. Wickham," and "Elizabeth is also aware that Miss Bingley doesn't know that her question will prompt Miss Darcy to think of Mr. Wickham." In fact, this scene is a classic example of what Blakey Vermeule describes as "experience of literariness" (221) associated with a particular pattern of mind-reading in fiction:

When flat characters interact with round characters, they mine a rich vein of theory of mind. In literary narratives from ancient to modern times, some version of the following pattern repeats itself over and over again: a flat or minor character provokes a fit of reflection in a round or major character. The fit of reflection enlarges the scene and the minds of the people in it, who engage in elaborate rituals of shared attention and eye contact. The scene itself becomes soaked in mindfulness, increasing the sense of self-consciousness all around. (219)

Fig 2. Full page from Nancy Butler and Hugo Petrus, *Pride and Prejudice*. MARVEL Illustrated, 2009. Used with permission.



None of this happens in the scene from the Marvel version featuring Elizabeth and Miss Bingley, in which Elizabeth manages to come off as the flatter character of the two. Significantly, her single-minded cheerfulness in response to Miss Bingley's dig is conveyed visually rather than verbally, for she is shown to beam at Miss Bingley with what we may call an uncomplicated smile. This shows that the visual can decrease the sociocognitive complexity of a graphic narrative as well as increase it. Had Petrus and Butler made Elizabeth's expression more ambivalent—for example, she could turn away more and frown slightly as she assures Miss Bingley that the Bennets are "recovering tolerably"—we would have had to attribute to her a more complex attitude toward the other woman's sneering query. Instead, what we have here is an ironic reversal of the dynamic described by Vermuele: one flat character, Miss Bingley, provokes an even flatter response from another character, Elizabeth, as the scene becomes drained of mindfulness all around.

In adapting *Pride and Prejudice* for the Marvel Illustrated line, Butler, a sophisticated writer in her own right and an author of award-winning Regency novels, had to make some hard decisions about simplifying the story line and eliminating secondary characters. Still, trimming the story and cutting down the number of characters does not automatically result in scaled-down sociocognitive complexity. As we have seen with *Robinson Crusoe*, a novel featuring a minimum of interwoven plots and only one character (at least for a while) can still pack in fourth- and fifth-level mental embedments. In other words, the decision about cutting down the levels of embedment is both more important than the decision about these other factors and independent from them. Also, in contrast to the two others, it's not a conscious decision. Writers adjust sociocognitive complexity intuitively, based on their assumptions about their audience's mind-reading preferences. (These are my terms, not theirs; writers don't think about "theory of mind" and "levels of embedment" when they develop their stories).

What are, then, the intuitive assumptions about mind-reading preferences of prospective readers that may have driven this downgrade from the fourth level of embedment in Austen's *Pride and Prejudice* to the second level in the adaptation? Butler's Introduction to the Marvel edition seems to provide some answers. She writes that she turned to Austen's novel because she felt that by focusing on the "angsty" superheroes, such as X-Men, Spider-Man, Hulk, and Iron Man, Marvel was "missing out on a whole segment of the buying public": girls. "Preteen and teenage girls have as much disposable income as their male peers, possibly more when you factor in babysitting money." Could a "female friendly" graphic novel, especially one based on the time-tested cultural

icon *Pride and Prejudice*, bring girls into the comics stores hitherto haunted overwhelmingly by boys?

Preteen and teenage girls were thus the ostensible target audience for Butler's adaptation. Hence one possible intuitive assumption behind calibrating its level of sociocognitive complexity seems to be that girls of this age prefer shallow mental embedments. Is this assumption correct?

I can only speculate about it at this point, but from my perspective the assumption is almost certainly wrong. First, given that our theory-of-mind adaptations evolved to track mental states involved in real-life social interactions, and that puberty, a time of sexual and social maturation, forces these adaptations to work in overdrive, we should expect that preteen and teenage readers would be on average particularly susceptible to a variety of cultural artifacts that mimic complex social environments, such as fictional narratives. Plainly put, there might be an evolutionary reason why you'll never consume so much fiction in so little time as you did between the ages of twelve and eighteen.

Second, women of all ages read more fiction on average across all genres than men do⁸ (they even read more science fiction, which is conventionally thought of as men's fare⁹), which suggests that women, on average, have a somewhat stronger need to process mental states than do men. What this all adds up to is that a publisher cannot assume that a young female reader—that is, the most avid mind-reader across all reader populations—prefers a second and third level embedment of mental states to the fourth and fifth level, which is to say, prefers an impoverished version of sociocognitive complexity. From where I stand, it is exactly the other way around.

But age and gender might be somewhat of a red herring here; the real issue at stake may be genre. Perhaps Marvel's adaptation of *Pride and Prejudice* was meant to tap not the market for novels but the market for educational study guides, such as SparkNotes and Cliff Notes (which, incidentally, has its own Manga Editions of classics). Thus Jay Clayton, who has written extensively about the history of adaptations of Dickens's *Great Expectations* by Classics Illustrated, has suggested that perhaps Butler's *Pride and Prejudice* is mostly used as a "study-guide for high school students who don't want to read the novel."¹⁰

For, remember, saying that *on average* preteen and teen girls tend to read a lot of fiction does not mean that any given girl reads a lot of fiction, that she reads more fiction than does any given boy, or that she automatically prefers a work with a higher level of sociocognitive complexity to a work with a lower level of complexity. Because we are dealing here with an average tendency, we are in the realm of descriptions rather than prescriptions, which means that we cannot predict reading preferences of a

specific boy or girl of our acquaintance. Either of them, assigned Austen's *Pride and Prejudice* in school, may find it too difficult and be more amenable to the "study-guide" version provided by Marvel.

A typical study guide downgrades sociocognitive complexity of the original by dispensing with, or at least streamlining, the individual writing style of an author. After all, it is individual style that brings in complex mental states. Writers of fiction don't construct crudely obvious mental embeddings, such as "he *wants* them to stop *thinking* whatever they are *thinking* and *imagine* instead that they are in this place that he is *thinking* about." They may say instead, "Once more. Say you are in the country." Eight words, not a single direct reference to mental states, yet at least three embedded mental states. Paraphrase it, getting rid of Melville's style, and you may end up with zero mental states: "Ishmael is now talking about the country." This is, in effect, what study guides do, and this is, to some extent, what Marvel's *Pride and Prejudice* does.

Or perhaps Marvel's adaptation taps the market for girls' magazines? The cover of Butler's *Pride and Prejudice* (Figure 3) is strongly reminiscent of the covers of such publications as *Seventeen*, *Teen Vogue*, and *Girl's Life Magazine*. These magazines function on the first and second level of embedment: "Interviewer: 'What kind of girls are you drawn to?' Justin: 'Someone who is funny. I like to laugh. But I need someone smart. I don't want to talk to someone who's dumb'" (Gandhi 121). Their forays into the third level are rare, but they do happen: "I learned pretty quickly that you need to be careful who you trust" (Martinez 143). With its *Seventeen*-like layout and cover teasers and subdued taupe and green color scheme, Marvel's *Pride and Prejudice* seems to promise its readers a level of sociocognitive complexity somewhat higher than that of *Seventeen* but not as (presumably) forbiddingly high as that of Austen's novel.

This brings us to the issue of the cultural packaging of sociocognitive complexity. It seems that covers of graphic narratives have been evolving a visual vocabulary for conveying to readers information about the level of sociocognitive complexity they are about to encounter. For instance, in many cases the volume of physical action and emotional intensity on the cover is inversely related to the level of sociocognitive complexity of the story. Static human figures with relatively neutral facial expressions (see the covers of *American Splendor*, *Asterios Polyp*, *Epileptic*, *Blankets*, *Embroideries*, *Ghost World*, *Logicomix*, *Maus*, *Persepolis*, *Shortcomings*, and *Stitches*) signal action turned inward (a phrase familiar to students of

Fig 3. Cover, Nancy Butler and Hugo Petrus, *Pride and Prejudice*.
MARVEL Illustrated, 2009. Used with permission.



eighteenth-century psychological novels), and hence a higher sociocognitive complexity.

Exceptions to this “rule” are important because they demonstrate another rule. If a cover contains a visual quotation from another medium or genre, the story itself is likely to exhibit high sociocognitive complexity. The cover of Art Spiegelman’s autobiographical *In the Shadow of No Towers* (2004) features floating, falling, crashing figures with goggling eyes, distorted mouths, and otherwise exaggerated facial expressions. Generally, this high volume of physical activity and emotions might be taken to be a marker of low sociocognitive complexity. In the case of Spiegelman’s cover, however, these figures are visual citations from *Happy Hooligan*, *The Upside-Downs of Little Lady Lovekins and Old Man Muffaroo*, *Hogan’s Alley*, and other comic strips published in Sunday comics in the late nineteenth and early twentieth centuries. Kicked up in the air by a goat wearing a white turban, they inhabit a brightly colored panel pressed against the dark silhouette of the twin towers, a visual equivalent, as it were, of an indented block quotation.

Counting up levels of mental embedment on a given page of Spiegelman’s memoir is an almost hopeless task. This is a case of sociocognitive complexity going through the roof by the combined effect of text, images, page layouts, and pastiches of the early-twentieth-century comic strips. For instance, limiting ourselves only to one section of page eight (thus ignoring the complicated visual quotation on the top and the bottom that adds more levels of embedment), we learn that shortly after the start of the war in Iraq, the narrator seems to have regained the ability to think of himself in the first person, something he hadn’t been able to do for some time after September 11. (On the previous pages, he speaks of himself only in the third person.) Still, the accompanying images suggest that he continues to be divided between several unhappy “Art Spiegelmans”: a multiplied self-reflexive consciousness that fosters complex mental embedments.

Thus the large central panel that serves as a background to several small panels on this page has a small “Art,” crazily agitated, with red-hot spirals instead of eyes, drilling a hole into the head of a big “Art,” to stuff it with news, while the big “Art” can’t really see anything at all besides the image of the two burning towers. Right in front of the big “Art,” there is an evil-looking George Bush and a Statue of Liberty being yanked off her pedestal, but he can’t see them either—or perhaps doesn’t want to?—while it remains visually ambiguous whether the small “Art” can. Another panel depicts the small “Art” (the narrator’s subconscious, as the text explains) drowning in newspaper headlines. Yet another shows the small “Art” comparing two glasses—one half-empty, another one-

fourth full—which are actually images (i.e., pictures) of two glasses, not the glasses themselves. Accompanying this panel is the caption “I know I see the glasses as half empty rather than half full, but I can no longer distinguish my own neurotic depression from well-founded despair.” So, apparently still visualizing himself in the third person, even though the text claims he stopped doing it, the narrator imagines the small “Art” remembering when he used to be able to tell the difference between being sad with no reason and being sad with a good reason, while now (with the big “Art” blinded by the image of the burning towers), he is not able to decide whether the former is any better than the latter.

This scenario involves at least the fourth level of mental embedment, perhaps the fifth or sixth. With visual embedments of such complexity, it’s difficult to come up with a neat chain of clauses that would accurately reflect our actual reading experience (as in, “Art suspects that he no longer knows what he thinks when all he thinks he sees is something that’s not really there”). To return to my opening story about the wordless exchange of glances with the woman at the library, we process visual information about people’s mental states in a fast, messy, and intuitive way, which we then inevitably misrepresent in our straightened out and ossified verbal accounts.

Ossified—because I am sure that we perceive a slightly different pattern of embedment every time we reread a graphic narrative of high sociocognitive complexity. With *In the Shadow of No Towers*, for instance, we may start out by seeing the small “Art” as representing (embedding) the mental states of the big “Art”; and then come to suspect that the big “Art” sees more than we originally gave him credit for and thus, may, in fact, represent the mental states of the small “Art.” And if we factor in the hitherto ignored visual quotations from other comic strips framing this page, we would have to figure out anew which “Art” (for there are other “Arts” on this page, including the one from *Maus*) is the one imagining the mental state of another “Art” imagining the mental state of another “Art.” Graphic narratives, particularly those committed to visual experimentation, intuitively exploit our tendency to obsessively watch, interpret, and reinterpret emoting bodies while remaining mostly unaware of the various steps involved in this process of fictional mind-reading.

Among other graphic narratives that signal their high sociocognitive complexity by incorporating visual quotations into their covers are Ames and Haspiel’s *The Alcoholic*, David B.’s *Epileptic*, Fingerman’s *Beg the Question*, Satrapi’s *Chicken with Plums*, Modan’s *Exit Wounds*, Spiegelman’s *Breakdowns*, and Bechdel’s *Fun Home*. Bechdel’s memoir is a particularly interesting example because each of its cover designs (i.e., for different paperback and hardcover editions) contains a different type of reference

to another medium or genre. One cover “quotes” photography, displaying a picture from the Bechdel’s family album, in which young Alison and her father share a porch but none of their personal space. Another cover quotes other arts and crafts, showing family members in the isolation of their rooms, practicing drawing, music, interior design, or model airplane building. Yet another places a nineteenth-century calling card with the title of the novel onto a Victorian tray sitting on an antique table next to an antique lamp. This cover refers to the sensibility of Bruce Bechdel, who transformed their house into a nineteenth-century mansion. It also comments on this sensibility—hence making this a visual quotation—by showing a bit of an electric cord that connects the antique lamp to a very modern power outlet, though it is concealed by the table.

Alison’s reflections on her childhood awareness of various fake surfaces created by her father constitute an important source of the book’s high sociocognitive complexity. Throughout her memoir, Bechdel relies on what David Herman has called “distributed temporality,” which is constituted by “an older, narrating-I seeking to come to terms with events involving a younger version of himself or herself, the experiencing-I—and thereby constructing, from the vantage-point of the present moment of narration, the earlier self *as* one that in fact had the experiences in question” (204). For instance,

In a panel that shows Alison polishing a mirror with a can of furniture polish to which the tag “incipient yellow lung disease” is affixed, the present moment of narration constitutes the temporal frame of reference; that is, it can be assumed that the experiencing-I didn’t know about the health risks of the polish at the time that she was using it. (206)

Once the vantage point of the present-moment narrator is thus established, it is used in other panels to ratchet up the levels of mental embedment. Hence the third panel on this page shows Alison approaching her father, who is applying a “bronzing stick” to his face, and calling out to him “Mom says hurry up,” while the inscription reads “My father began to seem morally suspect to me long before I knew that he actually had a dark secret” (Figure 4).

The words “bronzing stick” are within a tag that has an arrowhead-shape tail. According to Herman, on some occasions, as in the “incipient yellow lung disease” example above, Bechdel uses this type of tag to mark the “present moment of narration.” (On other occasions, this tag is more ambiguous, “revealing the limits of linear models of the life story.”) (205, 206).

So it is the young Alison who notices the silly “bronzing stick” (quotation marks in the original), but it is the narrating present self who

I DEVELOPED A CONTEMPT FOR USE-
LESS ORNAMENT. WHAT FUNCTION WAS
SERVED BY THE SCROLLS, TASSELS, AND
BRIC-A-BRAC THAT INFESTED OUR HOUSE?



IF ANYTHING, THEY OBSCURED FUNCTION
THEY WERE EMBELLISHMENTS IN THE
WORST SENSE.



MY FATHER BEGAN TO SEEM MORALLY
SUSPECT TO ME LONG BEFORE I KNEW
THAT HE ACTUALLY HAD A DARK SECRET.



Fig 4. From Alison Bechdel, *Fun Home: A Family Tragicomic*.
New York: Mariner Books, 2007. Used with permission.

foregrounds it and who interprets the fact that the young Alison noticed and remembered it, as evidence of her childhood awareness that there was something fake about her father. It's also the narrating present self who positions Bruce's face and the bronzing stick up close but keeps Alison out of focus in the background, as if Alison is wary about getting too close to her father while she is relaying a message from her mother that may irritate him, especially now that he is putting on yet another false façade. (We already know that Bruce is prone to temper tantrums and physical abuse.) Another way of interpreting this disparity in size and focus is to say that the narrator constructs Alison as relegated to the periphery of her father's world (and becoming increasingly aware of her marginal status), while the upkeep of various fake appearances constitutes its center.

If we map the levels of mental embedment of this panel, we may come up with: “The present-day narrator imagines that Alison wants to stay at a safe distance from her father because she is afraid that Bruce may get irritated by her mother’s ‘hurry up.’ The present-day narrator also supplies a more sophisticated motivation for Alison’s intuitive caution, implying that the source of Bruce’s irritation might be his interpreting his wife’s ‘hurry up’ as a tacit accusation that he is making them late while he is busy creating yet another fake surface with which he hopes to impress the outside world.” Or it could be something along the lines of: “The narrator imagines that Alison is aware that her father thinks of his family as mere props for his endeavor to impress the outside world in a certain way.” None of these mappings is perfect or definitive, but each tries to capture at least some of the sociocognitive complexity of the story created by Bechdel.

It must be obvious by now that I don’t just report on levels of sociocognitive complexity as independently present in narrative. Counting levels of embedment is not a math problem but a typical mode of literary-critical interpretation. That is, like all other literary interpretations, it attributes and interprets mental states, and as such depends on the perspective of a particular critic. This process is not arbitrary: to be reminded that some fictional narratives really are less sociocognitively complex than others, just try reading three or more mental states into that panel from Marvel’s *Pride and Prejudice* in which Miss Bingley is being catty toward Elizabeth! These attributions are subjective, however, to the extent that any interpretation of observable behavior in terms of underlying mental states is subjective.

Moreover, the extent to which *In the Shadow of No Towers* encourages this kind of attribution, re-attribution, and re-interpretation of mental states (as opposed to Marvel’s *Pride and Prejudice*, which mostly does not) raises intriguing questions about the importance of fictionality relative to sociocognitive complexity. Because of its strong autobiographical bent, *In the Shadow* cannot be called fiction, yet it obviously operates on a level of sociocognitive complexity comparable to that of what we call (with a nod to the eighteenth century) a psychological novel. Furthermore, research in cognitive psychology suggests that we turn to both fiction *and* biography because we are interested in people’s thoughts and feelings. The same experiments that demonstrated difference in reading preferences between neurotypical individuals and those with ASC have shown that neurotypical individuals who prefer narratives about people to narratives about objects treat biography on a par with fiction. As Barnes observes, the neurotypical subjects who showed a preference for reading passages about people over passages about objects,

did not distinguish between those that were described as fictional and those that were described as real. These results suggest that the appeal of fiction may depend more strongly on the *content* of fictional narratives than on the fact that they are fictional per se, and provide support for theories of fiction that attribute a large portion of fiction's appeal to its ability to co-opt real-world preferences, such as an interest in the mental states and emotions of others.¹¹

In other words, greedy mind-readers that we are, we read both fiction and memoir for people's mental states. Graphic narratives cater to our appetite by exploring medium-specific ways of portraying sociocognitive complexity. By medium-specific I mean that now it is the *visual* style or a combination of visual and verbal styles that brings in complex mental states. Given the remarkable achievements of *Fun Home*, *In the Shadow of No Towers*, *Persepolis*, *Blankets*, *Epileptic*, and other graphic narratives, we can look forward to further spectacular experimentation with the verbal-visual depiction of social minds.

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Notes

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1. See Baron-Cohen, *Autism*.
2. See Zunshine, "What Is Cognitive Cultural Studies," 3-4.
3. See Barnes, "Reading Preferences." See also, Barnes and Simon-Cohen, "Language in Autism."
4. Here is Crusoe on building a raft: "But the hope of furnishing myself with necessaries encouraged me to go beyond what I should have been able to have done upon another occasion" (43).
5. See Zunshine, *Why We Read Fiction* and *Getting Inside Your Head*.
6. That said, some experimental novels work hard to "hide" mental states—for example, by describing characters as objects and focusing on the surface features of rather than the motivations for their behavior.
7. That is, I couldn't find any fourth-level embeddings, which doesn't mean, however, that a more thorough critic might not uncover some.
8. This gender-based pattern wouldn't become obvious in a culture in which a majority of women are barred from literacy.
9. See Barnes, "Fiction and Empathy."
10. Email communication, April 7, 2010.
11. Barnes, "Reading Preferences."

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