Implicit Social Cognition

#### Forthcoming in Routledge Handbook of Philosophy and Implicit Cognition, Robert Thompson (ed.), Routledge Press. Please cite final version only.

# 1. Introduction

Social cognition refers to the various cognitive processes that are involved in social interactions. These include attention, memory, and meta-cognitive processes implicated in interpreting and interacting with other people. Of particular interest here is mentalizing: inferring others’ mental states in order to interpret or anticipate their behavior. Many theorists propose that mentalizing can occur implicitly (Blackburn 1992, p. 192, Davies and Stone 1995b, p. 2, Thompson 2012, Spaulding 2015). Typically, implicit mentalizing means that the cognitive processing involved in mentalizing can occur non-consciously, in the absence of voluntary control, and it may be difficult to verbally articulate how the mental process works or even the outcome of that mental process. This idea plays a central role in defenses of the Theory Theory (Nichols and Stich 2003) and the Simulation Theory, especially “low-level” mental simulation (Goldman 2006). Implicit social cognition also comes up in the developmental psychology literature on infants’ folk psychological abilities (Baillargeon, Scott, and He 2010, Onishi and Baillargeon 2005) and in the literature on implicit bias.[[1]](#footnote-1) In each of these domains, theorists propose that the mental processes underlying social interactions can be more or less automatic, unarticulated, and non-conscious.

Positing implicit social cognitive processes is common. However, there is little effort to articulate what counts as implicit social cognition across all these cases. As a result, theorizing about implicit social cognition is extremely disparate across each of these sub-domains. I will not attempt a systematic review of each claim of implicit social cognition. That would take much more space than I have here. Instead, I will present an account of implicit cognition that promises to be a fruitful, unifying account of implicit cognition in general. In the next section, I will present Michael Brownstein’s account of implicit cognition. Though it is a completely general account, I will argue in section 3 that it is well suited to explain various claims of about implicit social cognition. In the final section, I will discuss some open questions and future directions for research on implicit social cognition.

# 2. Implicit Cognition

In a recent book, Michael Brownstein (2018) offers a nuanced, empirically well-grounded account of implicit cognition. He argues that implicit cognition involves a cluster of co-activating cognitive components: noticing a salient feature, experiencing a low-level tension – a perceptual unquiet – and acting to alleviate that tension. The feature, tension, behavior, and alleviation (FTBA) cluster together and form habitual responses to aspects of our environments.

Let’s analyze these FTBA components in more detail. Not every feature of a situation, behavior, or person is important to us. The features that stand out to us depend on our background beliefs and motivations. Noticing a salient feature is a relatively automatic process. However, on this view, when we notice a salient feature, it is not like noticing a neutral, arbitrary feature of the environment. These salient features have rich perceptual content and an imperatival quality to them, a bit like J. J. Gibson’s notion of affordance (1986). These salient features present to us as to-be-acted-upon in a certain way, a way that is determined by our goals, cares, and the situational context. To take a non-social example, consider how elite athletes perform in their sport. A basketball player weaving her way down the court notices an opponent’s unprotected dribble or an opening lane toward the basket. She does not *choose* to notice these features. Rather, given her experience and education, these features stand out to her in a way that they may not to a less skilled player. Moreover, the unprotected dribble and open lane are not meaningless features; they represent opportunities for action for her.

Noticing the feature automatically triggers a kind of tension, a feeling of needing to do something. The tension is low-level, sometimes just an inarticulate sense of “perceptual unquiet,” but it is always geared toward a behavioral response. In the basketball player’s case, noticing the feature may trigger a feeling of needing to reach in for the ball, alert a teammate who is closer to the ball, or initiate a drive to the basket. The tension will vary in terms of strength and valence, depending on the circumstances and one’s goals. For instance, the fatigue the basketball player feels and the relative importance of the game will mediate the strength of the felt tension.

The tension motivates a particular spontaneous behavioral response aimed at alleviating the tension. The behavioral response may simply be a reflexive behavior – stepping back or reaching in – or it may be more sophisticated behavior – alerting a teammate or calling a play. The behavioral response one has to the tension is a function of one’s goals, skills, and the context. Successful responses are ones that alleviate the tension and unsuccessful responses are ones that fail to alleviate the tension.

Brownstein characterizes the behavioral response mostly in terms of physical dispositions. However, each of the FTBA components are meant to be *cognitive* components, and the behavioral component includes *psychological* dispositions, such as focusing your attention, categorizing, and mental rehearsal. In fact, Brownstein discusses psychological dispositions in explaining implicit empathic responses (2018, ch. 4) and implicit learning involved in acquiring a new skill (2018, ch. 3). Thus, although many examples of implicit cognition reference physical dispositions, it is appropriate to include psychological dispositions as part of the behavioral responses to felt tension. This aspect of the account is key to making it an account of implicit *cognition*.

The feature, tension, and behavior components tend to cluster together as we get more skilled in a certain domain, and, as a result, we develop habitual responses to particular kinds of features. The tension and behavior form a dynamic feedback system that can be trained and improved over time through a process of trial and error. Our spontaneous inclinations can adapt in response to rewards, like reduced tension, enabling an agent to notice new features and initiate new responses. Our spontaneous inclinations can also adapt in response to punishments, like persisting tension and inability to move on to the next task. For example, a developing basketball player learns that some moves are more successful in certain circumstances and against certain opponents. She’ll learn how to respond to these situations in ways that avoid obvious fouls, or elicit fouls from her opponent, and achieve her immediate and overarching goals. Her physical athletic skills co-evolve with her cognitive athletic skills. The feature, tension, behavior components dynamically interact and evolve over time as she learns what works to alleviate the tension and what does not work, until her skills reach a plateau.

It is important to notice that the basketball player may not be able to articulate, consciously reflect on, or directly control the salience of a particular feature, the tension this generates, or the behavioral response aimed at alleviating the tension. That is not to say it is impossible, but attempting to articulate or reflect on these components in real time may disrupt the athletic performance. It may be possible to articulate or reflect on these elements of performance after the fact, perhaps in learning to hone one’s skill or in teaching the skill to others. However, many elite athletes confess they don’t know *how* they perform like they do; they just do it. And this is an important feature of Brownstein’s account of implicit cognition.

I have used the highly tuned implicit cognition of elite athletes as example to illustrate how implicit cognition is developed and improved. It is important to note, though, that implicit cognition is not simply expertise. Even the novice basketball player has these implicit FTB responses; it’s just that her implicit cognition is not as finely tuned or as effective at achieving her goals, and the FTB components may not be as tightly linked. What makes cognition implicit on this view is that noticing a feature, feeling tension, and acting to alleviate that tension is a process that is typically spontaneous, non-conscious, and not easily articulated. Thus, implicit cognition encompasses both highly skilled expert behavior and relatively unskilled behavior.

One final note of clarification: Each of the FTBA components occur on a continuum of consciousness, explicitness, and control. Some components may sometimes be somewhat conscious, somewhat articulatable, or somewhat subject to control. The distinction between implicit and explicit cognition is not a neat dichotomy. This is not a bug in the account; it is a feature. Many findings on implicit cognition demonstrate just this kind of messiness with respect to conscious awareness, voluntary control, and articulation (Sloman 2014). In what follows, I will presuppose this continuity between explicit and implicit cognition and focus on implicit social cognitive processes that cluster on the implicit end of the spectrum.

# 3. Implicit Social Cognition

The basketball example may, at first, seem quite dissimilar from the kind of implicit cognition posited by social cognition theorists. However, the cognitive components that underlie athletic skills also underlie various other cognitive processes (Michael, Christensen, and Overgaard 2014). Brownstein applies his account of implicit cognition to detective work, implicit bias, aesthetic experience, among many other examples. In this section, I will apply this account to a sampling of implicit social cognition examples. I will argue that this account promises to unify disparate theorizing about implicit social cognition.

## 3.1 Mentalizing

Mentalizing is the attribution of mental states.[[2]](#footnote-2) We can attribute mental states to ourselves or others, either in the past, present, future, or counterfactual scenarios. Most of the focus of the empirical and philosophical literature on mentalizing is on the attribution of mental states to others. All of the main general theories of mentalizing hold that mental state attribution can be implicit and probably is implicit much of the time (Spaulding 2015). According to these theories, we understand others’ behavior by attributing mental states and, on that basis, explaining and predicting behavior. The Theory Theory, one of the main accounts of mentalizing, holds that mental state attribution occurs through a process of tacit theorizing, relying a rich body of tacit background knowledge about mental states and behavior (Blackburn 1992, Davies and Stone 1995a, Nichols and Stich 2003). The Simulation Theory, another major theory of mentalizing, holds that mental state attribution is the result of (sometimes) tacitly mentally putting yourself in a target’s situation and imagining how you would think, feel, and act in that situation, and then attributing those thoughts, feelings, and behavior to a target (Davies and Stone 1995b, Heal 1998, Goldman 2006). Though they disagree on the process, both Theory Theory and Simulation Theory propose that mentalizing can and often does occur implicitly. By this, they mean that the *process* (theorizing, simulating, or some combination of both for hybrid theories) and the *product* of mentalizing (an explanation or prediction) may be unconscious, unarticulated, and proceed without voluntary control.

Proponents of *4-E cognition*, i.e., embedded, embodied, extended, enactive cognition, have challenged the Theory Theory and the Simulation Theory’s notion of implicit mentalizing. Shaun Gallagher (2001, 2005) and Dan Zahavi (2011), among others, argue that there is no evidence that we unconsciously attribute mental states and explain and predict behavior. Gallagher, for instance, argues that mental state inferences may be subconscious, but the product, explanation or prediction, would have to be conscious and phenomenologically assessable. However, careful introspection reveals there is no evidence of explanation and prediction in typical social interactions. Thus, he argues, implicit mentalizing does not occur in ordinary social interactions. On this view, we mentalize only when we are in an unfamiliar situation, or when we encounter very odd behavior (Gallagher 2005, pp. 208-215).

Gallagher and other 4-E proponents maintain that implicit explanation and prediction is a non-sensical idea. Explanation and prediction *must* be deliberative, conscious cognitive acts (Gallagher 2005, 215). What these critiques get right is that unconscious explanation and (perhaps to a lesser extent) unconscious prediction *sound* odd. Our ordinary notions of explanation and, to some extent, prediction, bring to mind the careful deliberations of scientists. This connotation is unfortunate but not accidental. In the early days of the mentalizing literature, discussion of “theory of mind” were anchored in the Deductive-Nomological model of theories, which holds that theories deduce predictions and explanations. That is, with a general statement of the theory, a statement of the environmental conditions, and probably some auxiliary assumptions about measuring instruments, scientists literally deduce a statement about what has happened (an explanation) or what will happen (a prediction).

Although there are few proponents of the Deductive-Nomological model anymore, the language of explanation and prediction stuck around in discussions of theory of mind (what I call *mentalizing*). In other works, I argue that *interpretation* and *anticipation* are more appropriate terminology than *explanation* and *prediction* (Spaulding 2015, 2018). Not only do these terms better reflect the phenomena that theories of mentalizing are aiming to explain, they do not connote conscious, deliberative cognition like explanation and prediction do. Thus, the objection to implicit mentalizing in the end turns on a terminological confusion that we can easily resolve.

Pluralistic folk psychology, another recent challenge to the Theory Theory/Simulation Theory accounts of mentalizing, argues that most views of mentalizing too narrowly focus on belief and desire attribution and explanation and prediction (Andrews, Spaulding, and Westra 2020). Unlike 4-E challenges, pluralistic folk psychology accounts do not typically hold that mentalizing rarely occurs (Wolf, Coninx, and Newen 2021). Rather, proponents of pluralistic folk psychology typically advocate for expanding the scope of mentalizing.[[3]](#footnote-3) According to pluralistic folk psychology, mentalizing involves the attribution of various mental representations, including propositional attitudes, emotions, moods, sensations, character traits, stereotypes, etc. (Westra 2017a, b). These are interwoven with the frameworks, scripts, and schema we employ for understanding social interactions (Andrews 2008). Mentalizing is not limited to explanation and prediction on this view, either. We attribute mental states normatively, in order to socially regulate or mind *shape* others (McGeer 2007, Zawidzki 2013). Our mentalizing functions also to boost our own self-esteem, solidify in-group connections, and dismiss out-group members, especially in the context of conflict and competition. Our own motivations influence the strategies for mentalizing – e.g., egocentric projection for in-group members, stereotyping for out-group members – the mental state attributions we make, and what we do with these attributions (Spaulding 2017, 2018). Importantly, much of this occurs implicitly. That is, we are often not aware of, in direct control of, or able to clearly articulate the motivations, strategies, attributions, or uses to which we put these attributions.

Now that we have on the table various ideas about how mentalizing works, we can ask the question: how does implicit mentalizing work? Consider Brownstein’s FTBA account. Recall that what makes cognition implicit on this view is that each of the FTBA components occur on a continuum of consciousness, explicitness, and control. The features we notice, the tension we experience, and the psychological or physical dispositions this generates range from totally unconscious, ineffable, and incontrollable to somewhat conscious, somewhat articulatable, or somewhat subject to control. Subjects notice a feature, which triggers a targeted low-level tension and a behavioral response aimed at alleviating the felt tension. Importantly, the features we notice, the strength and valence of the tensions we experience, the directed behavioral response we produce are all a function of our situation, goals, and cares. A feature may be salient in one context for one individual, but not another. The same is true for the tension we experience and the behavioral responses we generate.

With respect to social cognition, the salient features are social in nature. Given the scope of what can be socially relevant, just about anything could be a salient social feature, e.g., motor movements, speech, clothing, nearby artifacts, etc. Registering the salient feature triggers an immediate felt tension. This could be simply a low-level, unarticulated feeling of something looking not quite right, or it could scale up to a fully conscious feeling of puzzlement or confusion. There are many degrees in between these two extremes, and the character of the tension in any given case depends on many factors, including an individual’s history, beliefs, motivations, and the situational context. The tension triggers a behavior. Behavior here is understood quite broadly and includes psychological and physical dispositions. The subject may do a double take to get better view of the salient features and context. She may mentally categorize the person, behavior, or event in terms of a familiar script, trait, or stereotype. She may instinctively label the person with a character trait or generate a plausible inference about a target’s mental states. She may also mentally rehearse other times she has been in a similar situation and project the result of that simulation to the target. Again, the psychological and physical responses are a function of a variety of factors, including the situational context and our own motivations and cares. If successful, the behavior will eliminate the felt tension. If unsuccessful, it will not, and the subject *may* go on to try out other mental or motor behaviors.

Brownstein’s account is well suited to explain implicit mentalizing, in its traditional theorizing or simulating guise, but also in other forms. It is distinctively well suited to explain motivated mentalizing (Spaulding 2017, 2018), an aspect of pluralistic folk psychology described above. Motivational factors drive people to notice certain features of people, behavior, and events. These motivational factors influence who we identify as part of our in-group or as part of an out-group. In certain contexts, and with certain goals, an individual may be considered part of a relevant in-group but in other context or with other goals she may be part of an out-group. In conjunction with in-group/out-group status, our motivations influence our approach to mentalizing (and whether we choose to mentalize at all). For instance, when we are motivated to solidify in-group ties, we may egocentrically project our own mental states on a target. When we are in competition with the target, we may stereotype or (for extreme out-groups) interpret them in non-mentalisic dehumanized frameworks, e.g., unthinking brutes or unfeeling automata. Motivational factors also shape what we do with the mentalistic inferences we make, i.e., whether we explain, justify, dismiss, normatively regulate, or predict a target’s behavior. Each element of the FTBA account is shaped by situational and motivational factors.

## 3.2 Empathy

Brownstein’s account is well suited to explain another significant domain of social cognition, as well: empathy. Empathy is recognizing another person’s emotions and, in response, sharing those emotions. Like mentalizing, empathy ranges from fully conscious and deliberative to implicit. We can work hard to understand another person’s perspective and feel their emotions from their point of view. We can also sometimes simply “see” what others are feeling and spontaneously share their emotions with little or no voluntary control over our empathic response. Sometimes, we may recognize others’ emotions and come to share those emotions in a way that is not obvious to conscious reflection. We simply find ourselves in happier moods around cheerful people, laughing at jokes that others are laughing at, or saddened by others’ sadness.[[4]](#footnote-4)

Also like mentalizing, empathizing is deeply shaped by motivational factors (Zaki 2014, Weisz and Zaki 2018). Our motivations drive us to avoid or approach engagement with others emotions. For example, when empathizing will lead to our own suffering, involve material costs (like money or resources), and when it will interfere with competition, we are motivated to avoid exposure to others’ emotions. However, empathy also has positive benefits for an individual. When empathizing leads to positive affect, strengthening of social bonds, and demonstrating socially desirable responses, we are motivated to attend to and share others’ emotions. We carry out these motivations to approach or avoid engaging with others emotions through various regulatory strategies, which may be selected and implemented consciously, explicitly, and voluntarily or non-consciously, in an unarticulated way, and with little direct control (Zaki 2014). These regulatory strategies include selecting our situations, e.g., choosing a route for our walk home, selecting a television program to watch, choosing news stories to read or figures and organizations to “follow” on social media. Another regulatory strategy is attentional modulation. When we are in a situation in which we are motivated to avoid engaging with others’ emotions, we can literally look away, focus on aspects of the situation that are unrelated to the emotion (e.g., what someone is wearing, features in the background), or simply think about something other than the emotions on display in front of us. When we are motivated to engage with others’ emotions, we focus our attention on the target’s face, what she is saying or doing, and tune out distracting information. Finally, we may carry out our motivation to approach or avoid engaging with others’ emotions by appraising the target. For instance, we may judge that the target is not *really* suffering; she is just being dramatic. Or we may think to ourselves that the target “had it coming” as a way of avoiding empathizing. When we want to empathize, we may regard the subject as innocent, fragile, or even martyr-like as a way to foster empathy.[[5]](#footnote-5) We frequently empathize, and we often are not consciously aware of, in full control of, or able to articulate the various aspects of our empathizing, and these features make empathy another domain of implicit social cognition that we ought to analyze.

Brownstein’s account of implicit cognition is well suited to explain many aspects of implicit empathy. In particular, analyzing our implicit empathic responses in terms of FTBA accurately captures the ways in which the situational context and our motivations influence the unfolding of our empathic responses. The context and our motivations determine which features of situation, behavior, or person are salient, the nature of the tension one experiences in response to the target’s display of emotion, the behavior one engages in (situation selection, attentional modulation, appraisal), and whether the tension is alleviated by the behavioral response. In cases where we are motivated to avoid engaging with others’ emotions, the tension will be eliminated to the extent that we can shift our circumstances or focus away from the target’s emotions or, failing that, negatively appraise the target. The tension will be successfully eliminated when we are motivated to empathize when we are appropriately situated and focused on the target’s emotions and positively appraise the target. Implicit empathy exhibits FTBA cognitive components, is context sensitive like implicit cognition, and driven by our personal motivations. Thus, this is another example of implicit social cognition that fits neatly in the FTBA framework.

## 3.3 Ontogenetic Development

The previous two examples of implicit social cognition focus on the mature cognitive capacities of adults. The final example I will consider concerns implicit social cognition in young children. Clearly, young children do not have the exactly the same concepts or cognitive capacities of adults, whether the subject is implicit or explicit cognition. However, I shall argue that the structural aspects of young children’s implicit cognition can be fruitfully analyzed in terms of Brownstein’s FTBA account.

First, we must address an ambiguity in the notion of implicit social cognition in the developmental literature. Sometimes the term refers to the kind of *tasks* or *methodology* used to investigate children’s cognitive capacities, and sometimes it refers to the nature of the cognitive processes. Implicit tests of social cognition do not require explicit verbal articulation to pass the tests. These include anticipatory looking, active helping, and violation of expectation. In each of these methodologies, a subjects’ non-verbal behavior (looking, helping, gaze time) indicate her expectations and her inferences about a target’s goals. However, implicit tests do not imply implicit cognition. One could, in principle, employ explicit cognition for an implicit test insofar as one could consciously, deliberatively represent (perhaps even in inner speech, for older children) the events in the test. The notion of implicit social cognition that is relevant for our purposes concerns the nature of the cognitive processes themselves.

While we should take care to distinguish implicit methodologies from implicit cognition in what follows, it is likely that passing these implicit tests will involve some elements of implicit cognition. Recall that on the account of implicit cognition we are using here, the implicit/explicit distinction is continuous, not dichotomous. Implicit cognition is characteristically less conscious, less explicit, and less subject to voluntary control. Thus, while we may not be able to decisively establish that passing an implicit social cognition test *requires* cognition that is non-conscious, unarticulated, and non-voluntary, in some experiments we may have good reason to think that subjects’ cognition is less conscious, less explicitly articulated, or more spontaneous. In particular, the spontaneous behavioral responses (anticipatory looking and helping) suggest implicit cognition. With that preliminary out of the way, we can discuss the experimental evidence.

There is a great deal of controversy over when infants and young children develop and employ mental state concepts. However, there are some widely replicated findings that implicate some level of sensitivity to others’ mental states early on in development. Between 12 and 18 months, children begin to spontaneously help other people without being instructed to do so. In a variety of contexts, including familiar and novel situations, children will distinguish accidents from intentional actions, infer a person’s goal, and help them achieve it. For instance, they will pick up out-of-reach objects and bring them to the person who dropped them, help put things away by holding open a cabinet door, use a newly acquired skill to open a box when a person clumsily fails to retrieve an object from inside, correct an adult’s action when it is going wrong, warn against possible mistakes, etc.[[6]](#footnote-6) Thus, starting at about one year old, children exercise a robust and flexible capacity to infer others’ goals and act to help them achieve their goals.

These implicit tests of young children’s social cognitive abilities do not imply the use of implicit social cognition, as I clarified above. However, given the nature of the tests, the age of the children, and the non-dichotomous notion of implicit cognition employed in this paper, it is likely that children are employing implicit rather than explicit social cognition in some respects. In particular, the spontaneous behavioral responses and the inability of very young children to explicitly articulate (even in inner speech) rationales for behavior indicate that children’s mental processing of these scenes is more spontaneous and tacit and thus on the implicit end of the continuum.

We can employ Brownstein’s FTBA account of implicit cognition as a framework to interpret these findings. Recall that what makes cognition implicit on this view is that noticing the feature, experiencing a tension, and acting to relieve the tension are typically spontaneous, unarticulated, and/or non-conscious. In these experiments, infants first notice a salient feature. For example, in the active helping paradigms, infants notice the experimenter’s interrupted trajectory of behavior. The experimenter may drop something, get blocked, or reach for and fail to grab an object. The salient feature presents to the children as something to be acted upon. Noticing the dropped toy, blocked path, or mistake generates a subtle tension. The children look longer at the agent and are spontaneously motivated to help the agent, e.g., by retrieving an object or opening a cabinet, removing an obstacle, etc. This spontaneous helping ought to alleviate the felt tension for the child.[[7]](#footnote-7)

What’s left unanswered here is the nature of the psychological dispositions in the FTBA cluster. The physical response involves longer looking times and spontaneous helping. But the real controversy in this field concerns the psychological dispositions triggered by noticing the salient feature and experiencing a subtle feeling that something is not quite right. Do infants and young children infer knowledge, or belief, or intention? Do they infer some simpler mental construct that is not a proper propositional attitude? Do they try to match what they are observing to a known pattern of behavior? Answering these questions is not a simple task. There is not a singular crucial experiment that will determine one answer to these questions correct and all other answers wrong. Rather, we have to carefully weigh the evidence and make a judicious inference to the best explanation about what kind of psychological dispositions best explains the bulk of the data. Given the uncertainty about some of the data and critiques of the data, I do not think we are in a position to say what the best explanation of the psychological dispositions is.

Despite not knowing the exact nature of the psychological dispositions in children’s implicit social cognition, the FTBA framework is useful here. It helps us articulate a structure for implicit social cognition and helps to show that – whatever the nature of the psychological dispositions – implicit social cognition is not an unusual posit. In fact, children’s implicit social cognition operates in the same way as implicit empathy, implicit mentalizing, and implicit cognition more broadly.

## 4. Conclusion

Theorists in many sub-domains of social cognition posit implicit social cognitive processes. However, there is little coordination amongst these sub-domains as to what counts as implicit social cognition. I have argued that we can use a general account of implicit cognition – Michael Brownstein’s FTBA account – to unify these disparate claims about implicit social cognition. I applied this account to mentalizing, empathy, and children’s socio-cognitive development. The FTBA framework is specific enough to articulate the similarities in these various domains but broad enough that it does not apply only to one sub-domain or another. In fact, it is meant to explain implicit cognition in general, not just various sub-domains of implicit social cognition. Thus, the FTBA account proves to be extremely useful in understanding the nature of implicit social cognition.

However, this account does not answer every question about implicit social cognition. As I mentioned above, the account does not settle the nature of the psychological dispositions activated in response to felt tension. As a result, it does not resolve the debate between the Theory Theory and the Simulation Theory. Nor does it validate or disprove the pluralistic folk psychology claim that mentalizing is a much broader phenomenon than simply theorizing or simulating. Nor does it resolve the debate about the development of children’s social-cognitive skills. Brownstein’s FTBA account of implicit cognition is a framework for having these debates, not a solution to the central questions of these debates.

As a framework, this account of implicit cognition turns out to be quite useful. Still, there are two concerns about its application to social cognition. The first concern regards the commitment to affective cognition. On this view, all implicit cognition has an affective component (Duncan and Barrett 2007). The strength and valence of implicit attitudes can vary greatly. Sometimes, the affective component is just an unarticulated feeling of something being amiss or a sense of perceptual unquiet. Other times, the affective component can be quite vivid and conspicuous for a subject. The view that all cognition is affective is not, as far as I am aware, incompatible with any particular claims about social cognition in the sub-domains I have discussed. It does not beg any questions against any particular accounts. In fact, most social cognition theorists do not directly discuss the scope of affective cognition at all. However, it is a substantial claim about cognition in general that social cognition theorists may resist for independent reasons. It is, thus, an open question for discussion whether this commitment is acceptable.

The second concern regarding FTBA and social cognition may be a bit more problematic than the first. Brownstein maintains that implicit attitudes – the representations of implicit cognition – are inferentially impoverished and insensitive to the logical form of evidence. Once implicit attitudes are activated (by noticing a salient feature with specific imperatival quality), the rest of the components automatically unfold in a sequence. Because of this automatic sequential unfolding, implicit attitudes exhibit a limited range of potential inferential patterns. If that’s right, then implicit attitudes cannot figure into practical reasoning like propositional attitudes do. This does not imply that implicit attitudes cannot change. As I discussed above, implicit cognition can evolve and improve over time based on positive feedback (e.g., reduced tension) or negative feedback (e.g., inability to move on to the next task). But, they are not directly responsive to logically contrary evidence. On Brownstein’s construal, implicit attitudes are not simply non-conscious versions of propositional attitudes.

The reason this may be problematic for implicit social cognition is that, in some sub-domains, theorists treat implicit social cognition as simply an unconscious version of explicit social cognition. Take mentalizing as an example. According to the Theory Theory, we make inferences to the best explanation about a target’s mental states (based on situational context, folk psychological knowledge, and background information) and generate an explanation or a prediction about a target’s behavior. When mentalizing is implicit, this process runs roughly the same way except that it unfolds without any need for voluntary control or conscious awareness. In other words, implicit mentalizing often is assumed to be unconscious practical reasoning about a target’s mental states and behavior. That does not mesh well with Brownstein’s view of implicit attitudes.

It is an open question how we ought to resolve this tension. We could, of course, reject Brownstein’s account of implicit cognition. Or, we could accept it and think harder about the character of implicit social cognition. Perhaps implicit mentalizing is not simply unconscious practical reasoning. Alvin Goldman’s account of low-level simulation (Goldman 2006, ch. 6, de Vignemont 2009) is ahead of the field in terms of offering a nuanced account of implicit mentalizing. He explicitly articulates the ways in which low-level simulation, which is implemented by mirror neurons on his view, differs from high-level simulation, which is implemented by enactive imagination on his view. It may be the case that the rest of the field needs to catch up and articulate similarly nuanced distinctions between high-level and low-level social cognition.

A final alternative is to accept Brownstein’s framework but reject the claim that implicit attitudes in social cognition cannot enter into practical reasoning. How would this work? One option is to argue that the FTBA components in social cognition are not as “sticky “as they are in other domains, such as athletic skill or implicit bias. If the FTBA components do not follow in a tight sequence, there is a wider range of possible inferential patterns. How wide this range needs to be in order to qualify as practical reasoning is a difficult question to answer. But, perhaps we do not need a fine-grained answer to that question in order to make space for implicit practical reasoning in social cognition. A second option for this response is to challenge the data that Brownstein presents in defense of the idea that implicit attitudes are inferentially impoverished and insensitive to relevant evidence. There is not enough space here to present such a case, but it is worth noting that the data that bear on this matter are complicated, often ambiguous, and controversial.[[8]](#footnote-8) If we were to opt for this response, the implications would apply far beyond implicit social cognition. If successful, the argument would allow implicit attitudes from any domain to potentially enter into practical reasoning.

There is much interesting work left to do in figuring out the nature of implicit social cognition. Brownstein’s account of implicit cognition is a good framework in which to ask the important and difficult questions about how implicit social cognition works.[[9]](#footnote-9)

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1. See Brownstein, Madva, and Gawronski (2020) for an overview. [↑](#footnote-ref-1)
2. Over the decades and across disciplines, the attribution of mental states has had various names. These include folk psychology, theory of mind, mindreading, mentalizing, cognitive empathy, perspective taking, etc. I opt for mentalizing because, based on recent interdisciplinary survey data it seems to be the term most theorists recognize and employ to describe the mental state attributions that underlie social interactions. [↑](#footnote-ref-2)
3. Although, some proponents of pluralistic folk psychology maintain that in thinking about social cognition, we should focus less on the attribution of mental states and more on the various other tools that enable mentalizing. See, for example, Andrews (2008) and Zawidzki (2013). [↑](#footnote-ref-3)
4. It is important to distinguish emotional contagion – the mere sharing of emotions, of which even newborns are capable – and empathy. Both involve a subject sharing a target’s emotions, but empathy proper requires that the subject recognize the target’s emotion, whereas emotional contagion does not. For implicit empathy, we may not consciously label the emotion or voluntarily choose to infer an emotion, and we may not voluntarily choose or be consciously aware of sharing the emotion. [↑](#footnote-ref-4)
5. The fact that our personal motivations shape our empathic responses has led to some critiques of empathy as a poor guide to moral decision making. Thinkers like Paul Bloom (2017) and Jesse Prinz (2011a, b) argue that our empathic responses are too idiosyncratic, subject to contextual influences, and shaped by individuals’ goals and cares to reliably guide our moral decision making toward the good. Empathy, they argue, leads to more biased and harmful moral decision making. My own view is that empathy *is* subject to these critiques, but it is far from alone in this regard. Social cognition itself is deeply shaped by our personal motivations, in-group/out-group dynamics, and biases that serve to reach our goals and solidify group affiliations and boundaries. See Spaulding (2018) for a defense of this view. [↑](#footnote-ref-5)
6. See Warneken (2015) for a review of these findings. [↑](#footnote-ref-6)
7. We can use this same FTBA framework to analyze anticipatory looking and violation of expectation studies on infant social cognition. The structure of the explanation will look the same for each kind of implicit social cognitive task. Given the sometimes spotty replication record of anticipatory looking and violation of expectation methodologies for infant social cognition (Dörrenberg, Rakoczy, and Liszkowski 2018, Powell et al. 2018), I will not rest much on these findings. My overall aim is not to establish that infants have or lack certain concepts or cognitive capacities but rather to show that the FTBA account can be utilized to explain implicit cognition of various sorts. [↑](#footnote-ref-7)
8. See Del Pinal and Spaulding (2018) and (Spaulding 2021) for a discussion of these data. In a work in progress, I address some of the concerns about evaluating the stability and evidence-sensitivity of implicit attitudes. [↑](#footnote-ref-8)
9. Thanks to Michael Brownstein, Peter Railton, and Evan Westra for helpful feedback on the ideas in this paper. [↑](#footnote-ref-9)