How We Understand Others: A Theory of How Social Perspective Taking Unfolds

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Abstract

Social perspective taking—the process through which perceivers discern the thoughts, feelings, and motivations of a target—is foundational for navigating social interactions, building relationships, maintaining mental health, promoting well-being, and a wide array of other desired outcomes. Despite its importance, little is known about how discrete social perspective taking attempts unfold. We propose a theory that the social perspective taking process consists of up to four distinguishable phases: perception of the target, motivation to engage in social perspective taking, strategy selection, and evaluation of the attempt. Scholars have emphasized two proximal outcomes of this process—social perspective taking effort and accuracy. We review the literature in support of these phases, noting the relative maturity of each area of research. In doing so, we hope this theory provides a framework for contextualizing how existing studies relate to one another across different subfields of psychology, facilitates testable predictions, prioritizes future investigations, and guides applied research designed to improve real-world social perspective taking.

Keywords: Bias, Cognitive/dispositional empathy, Empathic accuracy, Motivation, Person perception, Relationship, Social perspective taking

Moyer was one of the few pitchers in baseball who would think about Scott Hatteberg as much as Hatteberg thought about him. Moyer would know that Hatteberg never swung at the first pitch—except to keep a pitcher honest—and so Moyer might just throw a first-pitch strike. But Moyer would also know that Hatteberg knew that Moyer knew. Which brought Hatteberg back to square one.

—Michael Lewis in *Moneyball*

That large-heartedness—that concern and regard for the plight of others—is not a partisan feeling. It's not a Republican or a Democratic feeling. It, too, is part of the American character—our

ability to stand in other people's shoes; a recognition that we are all in this together...

—Barack Obama's 2009 Congressional address

The role of social perspective taking (SPT) in our daily lives covers an expansive continuum. At one end of the continuum, our capacity to “read” others facilitates skills as trivial as improved prediction of baseball pitches. At the other end, the SPT process anchors the human capacity to relate to one another across differences. Forming social relationships and living in community with others might be the single most important enabler of humans’

evolutionary survival (Lieberman, 2013).

Researchers have established the importance of SPT through a wide array of scholarship. Many studies address SPT's role in affecting a range of relationships: marriages (Long & Andrews, 1990; Verhofstadt et al., 2008), those involving employees (Williams et al., 2007), between teachers and students (Gehlbach, Brinkworth, & Harris, 2012), and across members of in-groups and out-groups (Galinsky & Moskowitz, 2000; Mooijman & Stern, 2016). Others cite the role of SPT in shaping behaviors including prosocial acts (Eisenberg, 1991), compromise (Trötschel et al., 2011), learning (Cigala, 2015; Mouw et al., 2020), aggression (Richardson et al., 1998), and discrimination (Todd et al., 2011). Still others stress how SPT affects individuals' mental health and adjustment (Burack et al., 2006; Chalmers & Townsend, 1990), identity development (Enright & Deist, 1979; Quintana et al., 1999), and capacity for empathy (Batson et al., 1997; Zaki, 2014). Some might even argue that people's capacity to take their own (future) perspective is one of the most critical ingredients to happiness—even if most struggle to do so accurately (Gilbert & Wilson, 2007). Alternatively, perhaps SPT's importance becomes most apparent when the process breaks down: Interpersonal misunderstanding is implicated in everything from autism spectrum disorders (Montgomery et al., 2016) to marital conflict (Bissonnette et al., 1997) to war (Bland et al., 2012).

Despite SPT's crucial role in social experience, scholarly knowledge of how SPT functions is piecemeal and incomplete. Researchers have identified factors that influence SPT (Davis & Kraus, 1997; Davis et al., 2004) and outcomes of SPT (Richardson et al., 1998; Trötschel et al., 2011). Theoretical work has proposed models for how this capacity evolves developmentally (Flavell, 2000; Selman, 1975a), what its different dimensions are (Davis, 2005; Gehlbach, 2004), as well as when and why it might backfire (Pierce et al., 2013; Skorinko & Sinclair, 2013).

But what actually happens when an individual—a perceiver—engages in the process of trying to understand a target person? What steps unfold? To what extent is the process linear or recursive? Once underway, how does an SPT attempt end? How do perceivers determine the accuracy of their inferences?

Despite substantial understanding of precursors, outcomes, and components of SPT, knowledge of the process through which perceivers actually read a target is surprisingly thin. Focusing on conscious, deliberate, effortful

SPT attempts, this article proposes a four-phase theory of how the process unfolds. We synthesize evidence from many of the studies that speak to discrete aspects of SPT; where there is a dearth of empirical guidance, we speculate on what likely occurs. Through this synthesis, we hope to achieve four ends. First, we aim to provide a contextualizing framework so that scholars can locate how particular studies fit within a larger whole. Second, we illustrate the types of predictions that the theory enables. Third, by noting the relative maturity of different strands of research, the article helps prioritize the relative importance of future studies of the SPT process. Finally, we hope that greater clarity about what the SPT process entails should offer insights into the practical problem of improving SPT.

Social Perspective Taking: A Definition and Key Distinctions

The Process of Reading Others

We conceptualize SPT as the process of a perceiver discerning the thoughts, feelings, and motivations of one or more targets. Frequently, SPT attempts entail trying to understand how a target perceives the situation. Although much research focuses on SPT accuracy as a primary outcome of interest (Ickes, 2003), perceivers' SPT effort is of comparable theoretical and practical importance (Gehlbach et al., 2015; Goldstein et al., 2014). We argue that SPT is best described as a complex aptitude (Corno et al., 2002; Snow, 1996). According to Snow (1996), a complex aptitude encompasses the coordination of a commitment pathway (i.e., the assembly of motivational resources) and a performance pathway (i.e., the assembly of relevant skills) that can be brought to bear on a particular task. For SPT these two pathways are particularly intertwined and interdependent (Winczewski et al., 2016).

As shown in Figure 1, the hypothesized process unfolds in four phases: perception of the target(s), motivation to engage in SPT, selection of SPT strategies, and evaluation of the SPT attempt. In other words, perceivers must first become consciously aware of a target. Next, they weigh the motivational question of how beneficial engaging in SPT will be relative to the cognitive or emotional effort required. For instances where there is sufficient motivation, within the performance pathway, perceivers next employ strategies to gather information and facilitate inferences about the target. Finally, they evaluate the accuracy of their SPT attempt.

Figure 1 The Phases of the Social Perspective Taking Process

Figure 1 shows that SPT attempts are not necessarily linear—each phase can influence other phases. For example, if a perceiver evaluates their SPT attempt as erroneous, they might become even more motivated to figure out the target. Furthermore, for many SPT episodes, certain factors may influence more than one phase at a time. For instance, cultural background might affect perceivers' initial perception of a target, their SPT motivation, and the strategies they select (Nisbett et al., 2001).

Distinguishing Social Perspective Taking from Related Constructs

Much scholarly work from various subfields of psychology examines similar phenomena. For some scholars, SPT is superordinate to a number of constructs. For example, SPT encompasses phenomena such as empathic accuracy—the extent to which inferences from a SPT attempt are correct (Ickes, 1997); nonverbal behavior—a subset of the information that a perceiver might utilize to make inferences about a target (Ambady & Rosenthal, 1993); mind perception—how perceivers infer who (or what) has a mind and therefore who might be an eligible SPT target (Epley & Waytz, 2010); cognitive empathy—the ability to understand others' emotions or thoughts (Decety & Yoder, 2016; Jolliffe & Farrington, 2006); and dispositional empathy (or dispositional

SPT)—the tendency to try to read others' thoughts or feelings (Davis, 1983). Unlike the present conceptualization of SPT, these more specific constructs do not include motivation, inferences from what targets say, inferences about target's thoughts, understanding targets' motivations, or situation-specific SPT episodes, respectively. Although reflexive mimicry (Cooke et al., 2018) and mirror neurons (Gallese & Goldman, 1998) may help perceivers better understand targets, these phenomena do not include deliberate, conscious attempts to perceive the thoughts and feelings of a target. Thus, they largely fall outside our conceptualization of SPT.

By contrast, others have positioned SPT as a subcomponent of, or prerequisite for other broadly conceptualized phenomena such as social intelligence (Ford & Tisak, 1983; Keating, 1978), prosocial behavior (Eisenberg & Miller, 1987), and empathy (Selman, 1975a).

SPT also partially overlaps with some constructs. For example, SPT and emotional intelligence (Mayer et al., 2008) both encompass the accurate perception of emotions in others. However, unlike emotional intelligence, SPT extends beyond the accurate perception of others' feelings to also encompass others' thoughts and motivations. Conversely, emotional intelligence is defined to include the use of emotions to facilitate thinking (Mayer et al., 2008). Similar to SPT, visual

perspective taking (Piaget & Inhelder, 1956) entails understanding how a target perceives the situation, but, unlike SPT, does not focus on understanding the thoughts or feelings of the target. Developmental psychologists' concept of "theory of mind" represents a similar phenomenon but at a very different developmental stage (Flavell, 2000). Perceivers' recognition that a target has a different mind that could contain different thoughts or emotions is a necessary developmental precursor to assessing the content of those thoughts or feelings. Others have focused on related constructs that facilitate SPT such as compassion (Batson et al., 1995) or empathic concern (Winczewski et al., 2016) which may help explain when and where SPT impacts particular outcomes. Finally, accurate SPT can be understood as the antithesis of biased person perception, i.e., when perceivers predictably err in their inferences as a means to save cognitive effort or protect their sense of self (Gehlbach & Vriesema, 2019).

Of all these related constructs, arguably "empathy" causes the most confusion, presumably because it has been defined in so many different ways. Batson and Ahmad (2009) offer some clarification by defining empathy as two cognitive states that overlap with SPT—(a) imagining how you would feel in someone else's shoes and (b) trying to imagine how another person would think or feel given their situation. Meanwhile, two affective/emotional states—(c) feeling the same way as another person feels and (d) feeling for another person (typically one in need)—constitute forms of empathy that are distinct from SPT. Despite the elegance and simplicity of this organizing structure, the field still lacks consensus on how to define empathy. Consequently, we are striving to clarify our definition and conceptualization of SPT rather than to differentiate it from the numerous permutations of empathy.

Types of Social Perspective Taking

A wide range of different types of SPT exist. Some SPT attempts occur with the target being present (e.g., attempting to ascertain why a colleague appears upset while having coffee with them) while others do not (e.g., a history student imagining civil rights protesters' feelings during marches). In some instances, perceivers will directly interact with their SPT target; other times, they will merely observe (Gehlbach, 2004; Gehlbach & Brinkworth, 2012). Sometimes the SPT process entails reflecting on past interactions; sometimes SPT occurs in the moment; and sometimes SPT is used to predict future interactions or even one's own future emotions (Gilbert & Wilson, 2007; Tamir & Thornton, 2018).

Some attempts focus on a single target; at other times, the focus is a group (Ames, 2004a). Some SPT targets are real people; others are fictional characters (Harris, 2000; Tamir et al., 2015).

A final distinction is especially important with regard to the different types of SPT: In some SPT attempts, perceivers put forth deliberate, conscious effort to try to read a target; other times, the attempt is more subconscious—akin to Kahneman's (2011) "System 1 and System 2" processing. For instance, passing a grinning stranger on the street may cause a perceiver to wonder what is so funny—in this case, the perceiver may experience no conscious motivation to engage in SPT. Even during very intentional efforts to figure out why a loved one is upset, perceivers may have little conscious awareness of the SPT strategies they are using.

We posit that our theory of how the SPT process unfolds describes many of these different types reasonably accurately. However, we focus explicitly on perceivers' conscious, deliberate, effortful attempts to take the perspective of one or more targets. In part, because studies collecting data on how a subconscious process unfolds contain much uncertainty, we cannot confidently speculate on how SPT unfolds during subconscious attempts. Instead, our model focuses on conscious, motivated SPT attempts where we have a more robust, dependable research base.

Relatedly, because SPT is such a fundamental building block of social interactions, a model of SPT might examine myriad outcomes—relationship outcomes, emotional well-being, cognitive understanding in educational settings, patient outcomes in health-care settings, and so forth. We focus on what we see as the two most direct, proximal outcomes of SPT attempts: the effort a perceiver puts into trying to take the perspective of a target and the accuracy of their attempt.

Specifically, our theory of how SPT unfolds draws from and helps synthesize three lines of prior work. First, the notion that SPT is multidimensional—consisting of ability and motivational components—is foundational to our approach (Davis, 1996; Winczewski et al., 2016). Second, the numerous biases that psychologists have accumulated from decades of research on person perception (Tagiuri & Petrullo, 1958) and more recent work on empathic accuracy (Ickes, 1997) we see as foundational tensions in SPT i.e., perceivers strive to read others accurately but are often derailed by competing motivations (Gehlbach & Vriesema, 2019). Finally, as our literature review shows, our model builds from extensive wisdom accumulated from laboratory studies that signal

Figure 2 Examples of Facilitative and Inhibitory Factors for Social Perspective Taking Motivation

how SPT can improve numerous outcomes. We complement these past efforts with a model focused on how SPT attempts may play out in real-world situations, bearing in mind that the extent to which knowledge from these studies generalizes to real world interactions is ultimately an empirical question (Gehlbach et al., 2022).

A Guiding Metaphor

Throughout the SPT process, many perceivers will feel competing tensions. On the one hand, perceiving others' thoughts and feelings accurately seems vital to navigating interactions with others (Gehlbach & Vriesema, 2019). On the other hand, the world is complex and other people are particularly complicated. Thus, conserving cognitive effort also seems highly adaptive, if not necessary (Fiske, 1995).

As a result, perceivers may behave like judges. Judges evaluate the evidence at hand, come to conclusions, achieve resolutions, and get closure (see Dijksterhuis et al., 1996; Webster & Kruglanski, 1994 for more on the need for cognitive closure). In short, they pass judgment. To simplify the navigation of complex social worlds and the complicated people within them, judging is a sensible strategy. However, judge-like behavior in the SPT process risks incomplete information gathering, inaccurate or biased inferences, and overconfidence in the evaluation of one's SPT attempts.

By contrast, perceivers who behave like detectives may be rewarded with greater accuracy in their SPT attempts. Detectives continually collect evidence, going beyond the readily available data to amass more information (see Cacioppo & Petty, 1982 for related work on the need for cognition). They test multiple hypotheses, looking to prove or disprove each. Often, they withhold judgment, which might extend the duration of their detective work. Although they may be rewarded with greater SPT accuracy, detective work comes with increased costs of time, effort, and managing uncertainty.

As we describe each of the four sections of the SPT process, we primarily focus on reviewing the relevant literature—how mature different lines of inquiry are, strengths and weaknesses of different research approaches, and which gaps in our knowledge ought to be prioritized. However, this tension between SPT effort and accuracy—the balance between judge-like and detective-like behavior—colors each phase of how the SPT process unfolds in the real world. Furthermore, understanding this tension may be particularly important for researchers wrestling with the applied question of how SPT attempts might be improved. Given the serious potential costs involved in both approaches, scholarly investigations that illuminate where the right balance of judge-like versus detective-like behavior is for a range of situations (e.g., superficial office water-cooler conversations versus couples deciding the fate of their marriage) will be

especially important.

The Social Perspective Taking Process

Perception of a Target

Perception of a target may look quite different depending upon the type of SPT attempt. However, the process always begins with the perceiver becoming aware of and forming an initial sense of the target. Researchers have investigated four core components of this phase: who perceivers classify as an eligible SPT target; the modality of the encounter; cultural influences on the perceiver; and the biases shaping perceivers' initial conceptions.

Who "Counts" As a Target?

Before any SPT can begin, an important threshold must be crossed. A perceiver must decide that a potential target has a mind. Can a prospective SPT target produce thoughts and feelings for a perceiver to discern? Is SPT with a given entity even possible?

Intuitively it might seem as though perceiving another entity as having or not having a mind is a clear binary outcome. Yet, scholarship paints a more complex picture. For instance, researchers find that perceivers will sometimes deny this affordance to fellow humans but attribute the existence of a mind to non-human entities (Epley & Waytz, 2010; Waytz et al., 2010). Scholars argue that perceivers judge the extent to which a target has a mind along the dimensions of experience (i.e., can a target experience pain, pleasure, fear, love, etc.?) and agency (i.e., can a target produce memories or thoughts, plan, exert a level of control over their surroundings, etc.? Gray et al., 2007).

Others have pointed to an additional critical factor: the extent to which a perceiver senses similarities with the target (Wang et al., 2022). Identifying similarities disposes perceivers to categorize potential SPT targets as members of the same social group which, in turn, can implicate the SPT strategy that might be used (Ames, 2004b), as well as what biases might impact the SPT process (Vorauer & Sasaki, 2009). These initial categorizations are not static, however. As an interaction proceeds, new similarities may be discovered; assumed similarities might not be borne out. Relatedly, some have identified the presence of a similar emotional experience as a critical part of the experience

of empathy between a perceiver and a target (Håkansson & Montgomery, 2003).

In addition to experience, agency, and similarity, situational factors may play a key role in perceivers' assessments of whether a target has a mind. In a situation where perceivers see out-group members as threatening, targets might be more likely to be perceived as having a mind, given perceivers' need to predict adversarial behavior (Hackel et al., 2014).

Much of the research in this area has focused on the causes and consequences of perceivers deciding that a prospective SPT target does not have (enough of) a mind to warrant a SPT attempt. The impact of these initial perceptions can be profound, leading to discrimination, prejudice, and dehumanization (Allport, 1979/1954; Waytz et al., 2010; Waytz & Schroeder, 2014). Perceivers may be more likely to disqualify potential SPT targets due to lack of a mind when a social connection with the target is absent, the target's goals are irrelevant to the perceiver's, no future interactions with the target are anticipated, or the perceiver's need for social connection is already sated (Waytz & Epley, 2012). A final line of research suggests that our emotional reactions may play an important role in the evaluation of who has, or lacks, a mind. For example, our brains may stop processing social out-group members as human when they elicit disgust (Harris & Fiske, 2006), thus reducing the likelihood that these out-group members are perceived as viable SPT targets.

Modality of Perception and Communication

Perception of targets can occur via a multitude of modalities—from a phone conversation to a photograph to an email to a mere recollection of a past social interaction. Different modalities offer a different number and type of perceptual channels with distinct affordances and constraints. For example, with a text message, the perceiver can draw inferences from words (and perhaps emojis to gauge emotional tone) but lacks facial expressions, gestures, or tone of voice. A phone call opens up additional channels such as tone of voice, pitch, pauses, inflections, and other para-verbals (Knapp & Hall, 2007). Face-to-face interactions offer up more channels still (e.g., body language, posture, and physical distance). In general, additional channels provide extra data to facilitate a perceiver's detective work.

Research supports this generalization. Focusing on the

impact of different modalities on SPT accuracy, Hall and Schmid Mast (2007) examined perceivers' ability to read targets' thoughts and feelings from: full video, audio, transcript, and silent video. Their findings support the notion that more channels facilitate SPT accuracy: the full video condition had the highest accuracy scores (and the most perceptual channels), followed by the audio-only group (fewer channels), followed by transcript-only participants (even fewer channels), followed by the silent video participants (fewer channels than the full video group, albeit qualitatively different channels than the audio and transcript groups). Different modalities facilitated different types of information—perceivers leveraged visual cues more when trying to infer emotions and less when inferring thoughts.

Complementing this study, Gehlbach and Brinkworth (2012) found that some participants articulated “increasing modalities” as a SPT strategy they used to improve their SPT accuracy (e.g., a perceiver asking to meet with a target in-person rather than continuing to trade emails). However, one exception emerged to the generalization that more communication channels should provide perceivers with more information. When targets are too shy or embarrassed to report their thoughts and feelings face-to-face, a more restrictive set of channels (e.g., writing) might ultimately provide more information. Furthermore, when a target is deliberately trying to deceive a perceiver (e.g., a child trying to convince a parent that they are not upset), additional modalities of perception may function in unexpected ways, offering more avenues to deceive as well as more ways in which true emotions might leak out (Ekman & Davidson, 1994; Ekman et al., 1999).

Culture

As another key component in the first phase of the SPT process, the perceiver's culture can play a crucial role in how the SPT process unfolds. Nisbett et al. (2001) review evidence that one's culture shapes an array of cognitive processes including one's focus of attention, attributions about causality, and the parsing of perceptual information. Of particular relevance, they suggest that people from cultures that embrace a more holistic approach to understanding the world around them (e.g., East Asian cultures, relative to Western cultures) are more likely to perceive and make attributions to situational (rather than dispositional) factors. In other words, perceivers from collectivist cultures might focus on the context surrounding a target, see the ways in which situation influenced the target's actions, and make inferences about the target's thoughts and feelings

accordingly. By contrast, perceivers from more individualistic cultures might focus more attention on the target, how the target's personality might have shaped their actions, and potentially make different inferences.

These cultural differences appear to impact later steps of the SPT process, with potentially distinct effects on SPT motivation and SPT accuracy. On the one hand, scholars have found scant evidence of individualistic/collectivistic cultural differences in perceivers' SPT motivation (Chopik et al., 2016). On the other hand, culture may affect the SPT strategy employed by different perceivers. One study found that Westerners tended to project their emotions onto SPT targets, while Easterners tended to employ a strategy of imagining what the ‘generalized other’ would feel (Cohen & Gunz, 2002). Relatedly, other research suggests that perceivers from collectivist cultures might be more accurate than those from individualistic cultures (Aival-Naveh et al., 2019).

Biases in Person Perception

Finally, systematic biases can facilitate and impede the initial step of perceiving a target as well as subsequent steps within the SPT process. The literature examining these biases is vast and a comprehensive review lies well beyond the scope of this article. However, Gehlbach and Vrieseema's (2019) distillation clarifies the relationship between bias and SPT: Perceivers navigate their social worlds with a default goal of trying to perceive others accurately. However, two competing motives can derail their attempts for accuracy. First, perceivers strive for cognitive efficiency as a means to simplify their complicated social worlds. Biases such as the fundamental attribution error (the tendency to disproportionately focus on a target's disposition at the expense of the situation; Ross et al., 1977) and the availability heuristic (the tendency to overemphasize what comes to mind easily when making judgments; Tversky & Kahneman, 1974) are examples of the mental shortcuts perceivers use to think less hard or more quickly. Second, perceivers' desire to preserve their sense of self may also undermine the goal of accurate person perception. For example, in confirmation bias, perceivers cling to their pet theories by selectively interpreting new information as supportive of their theory while discounting disconfirming information (Wason, 1960). In other words, perceivers may subconsciously prefer believing that their pet theory is correct than admitting that they were wrong. Simpson, Ickes, and Blackstone (1995) elegantly illustrate a unique circumstance where perceivers appear to be particularly

motivated to misread others. They demonstrate empirically that romantic partners will sometimes misread each other's thoughts or feelings rather than entertaining potential heartbreak, jealousy, etc. in an effort to protect their sense of self.

Gehlbach and Vriesema (2019) focus largely on the impact of social-cognitive biases on SPT accuracy. However, other lines of research implicate SPT motivation. For example, in naïve realism perceivers assume that they see objective reality and that those with a divergent point of view must be (a) exposed to different—potentially impoverished—information, (b) too irrational or lazy to process the information properly, or (c) biased. Such a tendency will presumably reduce perceivers' SPT motivation (Ross & Ward, 1996)—i.e., believing that targets should be more motivated to take their (“objectively correct”) perspective. In sum, while some potential targets may not qualify for an SPT attempt because they are perceived to lack a thoughts and feelings, other potential targets may not seem worth the cognitive effort; still others might be avoided because the perceiver feels threatened by what they might infer from reading these targets.

Future Research Priorities

This initial step of perceiving a SPT target—categorizing the target as a viable candidate for a SPT attempt, perceiving the target through a particular modality, viewing the target through a particular cultural lens, and navigating social-cognitive biases—implicates all subsequent phases of the SPT process. In assessing which targets might be viable or worthy of a SPT attempt, what other perceptual factors (beyond perceived similarity) contribute to whether a SPT attempt is made seems like a fertile area for further investigation. For instance, how do initial perceptions of gender, culture, or social status affect later phases of the SPT process? Relatedly, do these initial perceptions shape how charitable a perceiver's inferences about a target might be (assuming a SPT attempt is made)? Studies informing these questions should facilitate the development of interventions that might ultimately expand who perceivers acknowledge as viable SPT targets.

Although the research on the second component is scant, this work offers a clear hypothesis that perceivers benefit from more channels. In turn, this work raises additional questions: Are certain modalities associated with higher levels of SPT motivation? In what ways do certain modalities engender or constrain different SPT strategies? Do

important individual differences exist such that some perceivers are more motivated or more accurate when relying on certain channels? Finally, how do multiple modalities impact SPT attempts when targets are deliberately trying to deceive perceivers?

Research on the role of culture in the SPT process offers perceivers from one culture ways to potentially improve their SPT capacities by learning from approaches employed by another culture. Of the many fertile areas to explore, we argue that examining cultural differences and similarities beyond the well-studied individualistic/collectivistic differences is a top priority.

Finally, scholars have researched numerous social-cognitive biases with respect to their impact on how accurately we perceive others. Yet, open questions remain. How do these biases impact perceivers' SPT motivation? The particular strategies perceivers adopt? How (accurately) perceivers evaluate their SPT attempts? In sum, how biases in the initial person perception phase affect later stages of the SPT process is a clear research priority for understanding how SPT motivation or strategy interventions might function.

SPT Motivation

Once aware of one or more prospective targets, the question becomes whether the perceiver will become sufficiently motivated to attempt to take the target's perspective. Sufficient motivation is by no means a foregone conclusion. In fact, most people probably engage in SPT for only a small fraction of their possible opportunities—the cashier, the group of strangers waiting at the bus stop, the delivery driver, and many others likely fail to motivate most perceivers to generate the cognitive effort to make an SPT attempt. When perceivers' motivation is insufficient, their SPT attempt will cease—at least until their level of motivation changes.

Conceptualizing the motivation phase of the SPT process might be likened to adding weights to a beam balance (see Figure 2). As more motivating factors are added, like weights, to the right-hand side of the scale, perceivers' SPT motivation increases. Conversely, adding inhibitory factors to the other side of the scale diminishes a perceiver's SPT motivation. Likewise, when factors are removed from either side of the scale, perceivers' motivation will change accordingly. For example, a naturally curious perceiver facing an SPT target who is eager to influence in an

important situation should be more motivated than a less curious counterpart faced with an inconsequential SPT target in a low-stakes situation (Gehlbach, Brinkworth, & Wang, 2012). When the two plates of the beam balance rest equivalently, perceivers are on the cusp of engaging in the SPT process or ceasing their SPT efforts.

Figure 2 also illustrates the multiple dimensions of SPT motivation. We hypothesize four distinct dimensions of SPT motivation—three of which influence a perceiver's SPT motivation, while the fourth represents the primary outcome of SPT motivation. First, some perceivers are more likely to engage in SPT than others by virtue of their disposition. Second, SPT episodes occur in a particular context which will inevitably influence perceivers' SPT motivation. Third, perceivers enter particular SPT episodes with different levels of confidence (which may shift as the SPT episode unfolds). Fourth, the primary outcome of SPT motivation is the resultant SPT effort perceivers put forth in trying to read a particular target. Like adding and removing weights from the beam balance, as the SPT episode unfolds, perceivers expend or withdraw cognitive resources from their attempt to decipher a particular target. Furthermore, perceivers will persist within a particular SPT episode or across multiple episodes with the same target for different durations.

SPT Propensity: dispositional differences in SPT

Some individuals seem naturally curious about the minds of those they encounter in their social worlds (Gehlbach, Brinkworth, & Wang, 2012). These individual differences in the disposition to engage in SPT comprise SPT propensity—all other things equal, how likely is a perceiver to engage in the SPT process? This component of SPT motivation provides a baseline likelihood that any given perceiver will engage in SPT in a particular situation.

These individual differences have received scholarly attention for decades. Perhaps due to the prominence and extensive use of Davis' (1980, 1983) "Perspective Taking" subscale of his Interpersonal Reactivity Index, scholars have investigated a broad constellation of correlates of perceivers' SPT propensity. For example, Wolgast, Tandler, Harrison, and Umlauf (2020) identified gender and a number of different personality traits that predict dispositional perspective taking. Specifically, females were more likely than males to rate themselves highly. Openness to new experience, conscientiousness, extraversion, and agreeableness all manifested positive associations with SPT propensity.

Relatedly, Kajonius and Dåderman (2017) find modest negative associations between SPT and several personality disorders. Notably, one's SPT disposition appears not to impact one's SPT ability (Sunahara et al., 2022).

Hall and colleagues (2009) examined an adjacent construct to SPT—interpersonal sensitivity, defined as actively attending to and accurately judging others' emotional states and personality traits. Through a meta-analysis of 215 studies they found that interpersonal sensitivity was positively associated with many healthy psychosocial functioning variables such as tolerance, internal locus of control, and social adjustment, while negatively associated with neuroticism, depression, and other negative personality traits. Johnson et al. (2017) and Gerace et al. (2017) both identified self-awareness and self-reflection as strong influences on one's SPT propensity.

Beyond these cross-sectional investigations, some studies have examined how well SPT propensity predicts longer-term outcomes such as decreases in anti-immigrant prejudice (Miklikowska, 2018) and more positive relationships among married couples (Long & Andrews, 1990). Davis and Kraus (1991) suggest that positive associations like these might occur because those high in SPT propensity may better tolerate others, act in more accommodating ways, and elicit different behavior from others by virtue of their lack of selfishness and egocentrism.

If SPT propensity predicts important future outcomes, a key question then arises regarding the extent to which SPT propensity can change. Davis and Franzoi (1991) find evidence of moderate stability of SPT propensity among high school students. Flannery and Smith (2017) noted a decrease in SPT propensity from the early to later adolescent boys in their sample. Based on their findings with 5th graders, Wolgast and Barnes-Holmes (2018) suggest that teaching metacognitive strategies in the context of reading fiction may be linked with changes in students' SPT propensity. Findings from Tamir et al. (2015) may suggest that reading fiction might impact SPT propensity because particular neural pathways get to "practice" simulations of what others might be experiencing. Although new studies will presumably add nuance to this area, currently, the literature suggests that SPT propensity may change as a natural function of development and in response to contextual factors such as having teachers, family, or employers who regularly curate opportunities to practice SPT.

Context: situational factors influencing SPT motivation

Repeated exposures to situations that press people to engage in SPT may shape perceivers' SPT propensity over time. Yet, research also suggests that the immediate context impacts SPT motivation during specific SPT episodes. This research faces a unique challenge. Laboratory studies that incentivize participants to engage in SPT (e.g., via payments or course credit) provide SPT motivation artificially. Yet, real-world contextual factors may impact perceivers' SPT motivation in different ways.

With this caveat in mind, the roles perceivers and targets adopt in a particular relational context can have a big effect on SPT motivation (Steins, 2000). A perceiver who plays the role of dutiful employee may be highly motivated to take their boss' perspective. The same perceiver, in their role as head-of-household, may feel less motivated to take the perspective of various family members. According to some research, a primary motive for perceivers to engage in SPT is to establish a shared reality between themselves and a target (Hodges et al., 2018). Congruent with this idea and related to the role of perceived similarity in the previous phase, SPT motivation may generally increase when perceivers share similar past experiences with a target (Gerace et al., 2015); SPT motivation may decrease to the extent that dissimilarities are perceived (Nelson & Baumgarte, 2004; Williams et al., 2007). Other potentially influential details include: whether perceivers' and targets' roles are of equal or differential status, if the roles signal aligned or competing objectives, and the extent to which social norms convey clear or ambiguous guidance regarding how the roles should be enacted. Though likely important, the associations between SPT motivations and roles (e.g., of lesser or greater power) are equivocal to date (Galinsky et al., 2006; Galinsky et al., 2016; Gordon & Chen, 2013). A number of studies have examined SPT in negotiations—frequently supplying SPT motivation to a treatment group by instructing them to take the perspective of the other party (Epley et al., 2006; Galinsky et al., 2008; Gehlbach et al., 2015; Trötschel et al., 2011). The results of these studies are also mixed. Sometimes, boosting participants' SPT motivation improves relationship outcomes, such as compromise (Gehlbach et al., 2015) or the ability to find jointly beneficial solutions (Galinsky et al., 2008; Trötschel et al., 2011). Other times, increasing SPT motivation leads negotiators to assume adversarial motives in others (Epley et al., 2006).

In addition to the relational context and social roles, situations can impact SPT motivation in other ways. Beyond its

role in the SPT perception phase, culture appears to affect perceivers' SPT motivation. For example, SPT motivation may be greater in cultures where individuals have more permission to initiate new relationships and terminate existing ones more freely, i.e., "relational mobility" (Wang et al., 2018). Other situational pressures might be more specific. The number of distractions in a given situation can heighten perceivers' cognitive load, requiring them to withdraw cognitive resources from their SPT attempt to allocate them elsewhere. Conversely, if a SPT target or a particular situation is especially important, perceivers' SPT motivation should increase (Gehlbach, Brinkworth, & Wang, 2012). Relatedly, Zaki (2014) identifies three social/relational factors (positive affect, affiliation, and social desirability) that likely bolster SPT motivation, and three "avoidance" factors that inhibit SPT motivation (suffering, material costs, and interference with competition).

SPT Confidence: expectations for a successful SPT attempt

A third key factor researchers have explored is perceivers' SPT confidence. A host of foundational motivation theories—though none focused on SPT specifically—suggest that perceivers who are pessimistic about the likelihood of making accurate inferences will be less motivated to engage in SPT in the first place (e.g., Bandura, 1997; Ryan & Deci, 2017). How well these broad theories apply to the SPT context is complicated to disentangle.

Unlike the large swaths of research suggesting that confidence (or self-efficacy) closely predicts successful performance in other domains (Bandura, 1997), perceivers' SPT confidence seems to have little bearing on actual SPT accuracy (Ames & Kammrath, 2004; Ames et al., 2010)—though see Israelashvili (2019) for an exception. In terms of the role of SPT confidence in motivating perceivers to engage in SPT, Gehlbach et al. (2015) found that participants with greater confidence in their SPT reported putting more effort into their SPT attempts. Relatedly, Zaki (2014) theorizes that positive affect plays a key role in motivating people to engage in SPT. At the same time, people are likely overconfident in estimating their abilities to read others' minds. Murphy and Lilienfeld's (2019) meta-analysis showed that self-reported cognitive empathy scores only accounted for 1% of the variance in SPT accuracy (with great heterogeneity observed across experiments). In sum, a perceiver's SPT confidence appears to be an important factor in catalyzing SPT attempts, yet unrelated to the accuracy of those attempts.

*SPT Effort:**the exertion put forth and duration of SPT attempts*

If SPT propensity, situational factors, and SPT confidence are primary influences on SPT motivation, SPT effort can be thought of as the primary output. Perceivers vary in how hard they try on any given SPT attempt (i.e., exertion), how much time they spend trying to read a target (i.e., duration), and how often they return to make a new SPT attempt with that target (i.e., frequency). These indicators each contribute to the overall SPT effort that a perceiver puts forth.

Yet, few studies have examined SPT effort directly. Gerace and colleagues (2015) focus on the ease of taking the perspective of different targets (see also Chambers & Davis, 2012 and the implications for more empathic responses as a result). Although Goldstein, Vezich, and Shapiro (2014) examine perceptions of others' SPT effort rather than one's own SPT effort, they found that perceivers who think that a target has made the effort to take their perspective realize multiple relational benefits. Building on this foundation, Gehlbach et al. (2015) found that when perceivers think that a target has put forth greater SPT effort, the perceivers tend to reciprocate. Other research indicates that socially rejected perceivers respond by putting forth greater SPT effort (Knowles, 2014).

Finally, it is worth noting that, in at least one study, how hard a perceiver tries in a given SPT attempt appears to have no bearing on the accuracy of that attempt (Hall, Blanch, et al., 2009).

Future Research Priorities

Beyond perceivers' initial perceptions of the target, what else will impact their SPT motivation? Past scholarship suggests that perceivers will bring a particular disposition into a specific context, which will imbue them with some level of SPT confidence. These factors combine to influence the amount of SPT effort that perceivers put forth.

Despite the strong foundation of research on SPT propensity, several questions remain. In particular, how much does a perceiver's SPT propensity influence their SPT effort in a given situation? Knowing how much variance in SPT effort is explained by SPT propensity would inform numerous practical questions ranging from the value of hiring people high in SPT propensity to how responsive we might

expect couples who are higher in SPT propensity to be in their relationship (Winczewski et al., 2016).

As a related research priority, perhaps the biggest challenge for our understanding of SPT motivation is the dearth of data from naturalistic studies that would inform our understanding of how contextual factors impact SPT motivation. How does SPT motivation function outside of laboratory studies—where researchers often imbue participants with SPT motivation by simply instructing them to engage in SPT? As the number of naturalistic studies grows, so will our understanding of situational factors, such as the relational context, assumed roles, and other situational pressures. In turn, this knowledge is likely to facilitate the development of interventions to optimize SPT motivation.

Understanding SPT confidence's contribution to overall SPT motivation seems pivotal, yet complicated. Evidence suggests that SPT confidence is unrelated to people's actual ability (Ames & Kammrath, 2004). Furthermore, overconfident perceivers might be particularly unmotivated to engage further in the SPT process. Thus, understanding whether to prioritize bolstering the SPT confidence of perceivers, keeping their confidence in check, or finding the optimal balance is a vital step in the development of effective SPT motivation interventions.

For those in applied settings, intervention work on SPT effort may be of the greatest interest. Specifically, research that tests the efficacy of reminders to effortfully engage in the SPT process in naturalistic settings could be particularly valuable. Would interventions as simple as reminders for perceivers to simply "turn on" their SPT ability more frequently produce benefits? Or would interventions offering more specific guidance on how hard, long, or frequently to try to take the perspective of a particular target be more effective?

SPT Strategies

The initial perception and SPT motivation phases of the SPT process are necessary, but not sufficient, conditions for making accurate inferences. Perceivers also need to employ one or more strategies in order to read others. In the same way that detectives may alternate between collecting clues and developing hypotheses, perceivers frequently iterate between two broad types of strategies: information gathering—to learn more about the target, and inferential—to develop conjectures about a target's thoughts, feelings, motivations, and perceptions of the

situation (Gehlbach & Brinkworth, 2012). Intuitively, it may seem as though perceivers (or detectives) might want to gather all available information about their respective targets first and only then begin making inferences. However, it seems more likely that these two processes are mutually influential. Newly gathered information may spark ideas about a target's thoughts and feelings; those new hypotheses require additional information gathering to test their plausibility, and so on.

Information Gathering

In preparing to make inferences about a target, perceivers typically synthesize information from multiple sources—some of which might be directly observable, some of which might rely on recollections of previous encounters with the target, and some of which might require active solicitation of information. For example, Gerace et al. (2013) find that their interviewees gathered information from the target and themselves (e.g., putting themselves in the target's shoes to imagine how they might feel) as well as from general information.

Perhaps the most obvious information gathering strategies are those that rely on direct observation. Perceivers might focus their attention on specific sources of potentially insightful information such as targets' facial expressions as a means to making inferences about emotional states (Zhang & Parmley, 2011; Zhou et al., 2017). Decoding of facial expressions has spawned a rich line of research regarding how universal facial expressions are, how accurate inferences about facial expressions are, how targets often fabricate emotions, and other questions with important implications for the SPT process (Ekman, 1993; Ekman & Friesen, 2003). Beyond facial expressions, perceivers also use targets' tone of voice and paraverbal cues (Hall & Schmid Mast, 2007), posture (Coulson, 2004), as well as gestures and other nonverbal behaviors (Ambady & Rosenthal, 1993; Knapp & Hall, 2007; Riggio, 2006).

However, direct observation may not always clearly signal a target's mental state. Sometimes emotions overpower a perceiver's capacity to observe a target with fidelity; conversely, sometimes a target is sufficiently overcome with emotion that (although emotions might be directly observed) thoughts and motivations are difficult to decode. In these situations, emotion regulation becomes an important companion strategy to direct observation. In other words, sometimes emotion regulation is required before other information gathering approaches are feasible (Gehlbach &

Brinkworth, 2012). Direct observation attempts can also be attenuated when the modality of the interaction restricts perceivers' ability to collect information (e.g., the previous example of text messages). When the situation allows, perceivers may strategically gather more information about a target by shifting the modality of their communications (Gesn & Ickes, 1999; Hall & Mast, 2008).

Additional rich information about targets may exist through past perceiver-target interactions or interactions the perceiver has with third parties who know the target. Thus, recollection (individually or in concert with others) provides a means to remember relevant information that could inform the current SPT attempt (Gehlbach & Brinkworth, 2012). This strategy may help explain why perceivers are more accurate perspective takers of friends than of strangers, even after controlling for their interaction frequency and dispositional characteristics such as sociability (Stinson & Ickes, 1992). Friends can simply recollect and use a greater amount of relevant information than strangers as they make inferences.

A final set of information gathering strategies consists of trying to extract relevant information directly from the target. This might be as simple as a perceiver directly asking questions of a target—what Epley and colleagues describe as “perspective getting” (Epley, 2014; Eyal et al., 2018). In other instances, these strategies might be more sophisticated. For example, Gehlbach and Brinkworth (2012) described counseling psychologists who strategically shared their perspective with clients, hoping to entice clients to reciprocate.

Inferential Strategies

The inferential strategies that perceivers adopt in real life may or may not parallel those used in experiments; they may also be hard to capture in observational studies. For example, the “day-in-the-life” technique (Galinsky & Moskowitz, 2000) requires that researchers identify a target of interest (e.g., a skinhead, an elderly person) and ask participants to write a brief passage in which they are instructed to, “imagine a day in the life of this individual as if you were that person, looking at the world through his eyes and walking through the world in his shoes” (p. 711). This SPT strategy may cause beneficial (Todd et al., 2011) or negative outcomes (Vorauer & Sucharyna, 2013) for participants depending on the study. However, studies have not shown whether perceivers actually utilize this strategy in the real world.

A related set of strategies—those that build off of “eyewear” and “footwear” metaphors—have been employed in real-world contexts. Gehlbach and Brinkworth (2012) describe this family of strategies as projection with anchoring and adjusting. Depending on their initial read of how similar they are to a target (Ames, 2004b; Gerace et al., 2015), perceivers may adopt an approach in which they mentally project themselves into the situations of others (e.g., seeing the world through someone else’s eyes or walking around the world in someone else’s shoes). However, despite anchoring with their own personal experience, perceivers may also realize important ways in which they differ from the target (Van Boven et al., 2000; Van Boven & Loewenstein, 2003; Wang et al., 2022). Thus, they may serially adjust their guesses about the target’s experience from their initial anchor (Tamir & Mitchell, 2013). Using distinct approaches, Epley et al. (2004) and Ames (2004b) find convergent evidence that perceivers use these strategies. Other scholars (Batson et al., 1997; Cooke et al., 2018; McAuliffe et al., 2020; Myers et al., 2014), have studied instructions that explicitly ask participants to employ these projection/anchoring-and-adjusting strategies. Finally, the advent of virtual reality allows research participants to virtually see the world through an avatar’s eyes and walk around the virtual world in their shoes (Gehlbach et al., 2015; Yee & Bailenson, 2006).

Another strategy with evidence of real-world usage entails generating of multiple hypotheses. In one study, soliciting an additional, outside opinion improved the accuracy of participants’ perceptions of how a target group thought about a set of social issues (Lieberman et al., 2011). Relatedly, Lord, Lepper, and Preston (1984) found that a “consider the opposite” strategy aided the accuracy of social inferences.

In a very different approach, Broockman and Kalla’s (2016) field experiment trained door-to-door canvassers to use an analogic perspective taking strategy with the prospective voters they interviewed about transgender rights. Specifically, canvassers encouraged prospective voters to recall a time when they had been judged by others for being perceived as being different. Findings suggest that this approach helped reduce voters’ feelings of transphobia—results which endured for three months or more.

At least one other strategy whose real-world prevalence remains unknown has been used in studies. Specifically, Eyal and Epley (2010) find that participants make more accurate social judgments when instructed to match the construal level—the level of detail with which people think

about themselves—of their SPT target.

In addition, a number of studies simply do not capture what SPT strategies their participants use. For example, Meyer and Lieberman (2016) do not provide any specific SPT instructions to their participants. Skorinko, Sinclair, and Conklin (2012) used a scrambled word task to prime perspective taking but did not instruct participants to use any particular strategy.

Finally, a number of strategies that perceivers report employing have not been recreated by laboratory studies—for example comparing and contrasting different individuals to the target individual or comparing the target individual’s past (or typical) behavior to their present behavior (Gehlbach & Brinkworth, 2012).

Future Research Priorities

After perceiving a target and getting sufficiently motivated to take the target’s perspective, perceivers must decide upon their strategic approach. Like detectives tracking down evidence and developing hypotheses, perceivers must gather information about the target and make inferences about their thoughts, feelings, perceptions, and motivations. Researchers seeking to more deeply understand these groups of SPT strategies face an immediate methodological challenge: Do people have the self-awareness to know and describe the SPT strategies that they use (Nisbett & Wilson, 1977)? Thus, a preliminary research priority is methodological: Can scholars find high-fidelity ways to learn what SPT strategies people employ in their daily lives? Laboratory studies that allow perceivers to employ their own SPT strategies and then ask them to articulate their strategic approach could be an informative starting place. With fewer distractions in a laboratory setting, perhaps people could reliably report on the strategies they have just used. The experience sampling approach of Depow et al. (2021) to understand how empathy unfolds in naturalistic settings offers a promising complementary approach.

Beyond this key question, one clear priority is to better understand the interplay between perceivers’ information gathering and inference generating strategies. How does this process typically unfold? And how should it unfold for optimal SPT accuracy? Are perceivers who spend more time as detectives by gathering more information typically more accurate than perceivers who are more judge-like and quickly make inferences? Relatedly, understanding

whether certain strategies are generally more effective than others or whether certain strategies are more effective for certain perceivers is comparably important as a future direction.

In sum, research has investigated numerous SPT strategies in laboratory experiments. Some have evidence of real-world implementation; others do not. As more studies of SPT strategies shift from the lab to the field, scholars will want to know: what strategic approaches are typically used, which strategies tend to be most effective, and how much does the efficacy of strategic approaches depend on the perceiver and the situation?

Evaluation

After perceivers encounter a target, become motivated enough to take the target's perspective, and enact their SPT strategies, they come to a decision point: Are their inferences correct (or close enough)? Do they need to continue their detective work by collecting more information? Or should they simply terminate their SPT attempt without resolution (e.g., because the target is too inscrutable)? Alternatively, perhaps the perceiver has achieved the desired outcome—e.g., a teenager successfully getting to borrow the parents' car for Friday night—so that the need to engage in SPT subsides (i.e., the motivation scales tip away from the teen being motivated to understand the parents' point of view). In contrast to the first three phases of the SPT process, far fewer studies have examined evaluation of SPT attempts.

Feedback

Central to perceivers' evaluation of whether they should declare success, keep working, or give up on a particular SPT attempt is whether they obtain feedback on the accuracy of their inferences. One might assume that providing perceivers with feedback would help boost their SPT accuracy both for a particular target within a particular SPT episode as well as over time, developmentally. However, few studies speak to this possibility. The ones that do present conflicting evidence. Marangoni et al. (1995) find that participants' SPT accuracy improved with continued exposure to a particular SPT target and that feedback accelerated their improvement. On the other hand, Klein and Hodges (2001) found no differences in the SPT accuracy of their participants who received feedback, compared to those in the control group.

Personality/Disposition

Building off of the SPT motivation phase, we might hypothesize that those who are dispositionally higher in SPT confidence may be more likely to assume that they have figured out the thoughts or feelings of another and bring the SPT attempt to a close. Perhaps those high in personality traits like neuroticism or conscientiousness would be less likely to terminate their attempts, worrying that they might make mistakes about the SPT target. Relatedly, dispositions like the need for cognition or need for closure (Cacioppo & Petty, 1982; Webster & Kruglanski, 1994) seem likely to influence perceivers' evaluations of their SPT attempt and when to terminate the attempt.

Additional Biases

The biases from the perception phase may also be impactful at this stage. Perhaps the most obvious example is confirmation bias. Though often studied in contexts other than SPT (Nickerson, 1998), this tendency to prioritize data that support one's pet theories and underweight countervailing evidence is likely to cause perceivers to terminate their SPT attempts early. Additionally, Kruger and his colleagues have explored the "better-than-average" effect and related egocentric biases (Kruger & Dunning, 1999; Kruger et al., 2005). They find that people often overestimate their prowess in social interactions and are not particularly accurate in their self-evaluations. Presumably these limitations would affect perceivers' abilities to evaluate their SPT attempt with fidelity.

Scores of other biases have been shown to impact perceivers' SPT attempts, as well as how inaccurately people read each other (e.g., Mastroianni et al., 2021) and even themselves (Gilbert & Wilson, 2009). However, no studies to our knowledge have directly examined the impact on social cognitive biases on the SPT evaluation phase specifically.

Future Research Priorities

Although the dearth of studies in this domain makes prioritizing challenging, two research areas seem particularly important. First, because feedback intuitively seems particularly likely to help perceivers improve their SPT accuracy, research that can test the impact of feedback on SPT accuracy and effort seems important to prioritize. Second, it will be important for scholars to better understand what factors encourage perceivers to not come to conclusions

but to instead continue to remain curious about a target and collect more information. In other words, what encourages people to stay in detective mode rather than shifting into a more judgmental mindset?

Implications

Theories aim to accomplish multiple ends—organize ideas, generate predictions, distill complex phenomenon, prioritize future research, explain and describe how the world functions, etc. (Greene, 2022). Although we hope our theory of how the SPT process unfolds accomplishes many of these goals, in this article, we focus specifically on four aims. First, we provide an organizing context for the research in this area. Second, we illustrate how our theory can facilitate testable predictions regarding how SPT functions. Third, we identify broad priorities for future research. Finally, we illustrate how the theory can direct attempts to improve perceivers' SPT effort and/or accuracy.

Contextualizing and Organizing Extant Evidence

Scholars from several branches of psychology have examined how we discern the contents of others' minds. This proliferation has facilitated substantial progress towards understanding different components of SPT, as well as its upstream influences and downstream outcomes. As a by-product, this diversity of traditions has led to investigation of many similar, overlapping phenomena in the literature. By articulating a theory of the SPT process, we hope to provide some coherence across these valuable lines of research.

With an organizing architecture of what the SPT process looks like, we hope that scholars can see where different lines of research inform and intersect one another. For example, Galinsky and Moskowitz's (2000) experiments asking participants to imagine "a day in the life" of a target person supply perceivers with a (stereotypical) target and motivate them to engage in SPT through use of a specific SPT strategy. By contrast, studies assessing perceiver's SPT propensity address the SPT motivation phase. Epley's (2014) notion of "perspective getting" is an information gathering SPT strategy while the idea of anchoring and adjusting is an inferential strategy (Epley et al., 2004).

Hopefully, this architecture facilitates scholars' efforts to define and situate their constructs of interest, describe their function within the broader SPT process, and articulate

their theoretical importance.

Theory-based Predictions

To the extent that this formulation of the SPT process is accurate, numerous predictions might be made. Some might generate predictions from the sequence of the process. Building from Figure 1, scholars can predict that the more perceivers think of their target as having a mind (in Phase I)—all other things equal—the greater the perceivers' SPT motivation will be and the more SPT effort they will put forth (in Phase II). As the absence of an arrow from SPT motivation to the Perceiving phase indicates, the theory would not predict the converse. The theory would also predict that as a perceiver employs more (and more varied) SPT strategies, the more likely that perceiver is to get some feedback on the accuracy of their attempt (e.g., because distinct strategies may enable convergent conclusions).

Other predictions might focus on the interrelationships of key components within one phase of the process and/or on associations with outcomes. For instance, within SPT motivation, we would predict that more confident perceivers will be better liked by others despite the lack of correlation between SPT confidence and accuracy. Specifically, the theory indicates that greater SPT confidence should increase SPT effort, and targets prefer perceivers who try to take their perspective (e.g., Goldstein et al., 2014). Thus, a positive association between perceivers' SPT confidence and target's liking would be expected.

Finally, the theory may add nuance and explanatory power to existing theories of SPT. Developmental psychologists describe SPT and related phenomena as improving across developmental stages as certain cognitive capacities mature, such as the ability to think abstractly or use context clues (Eisenberg et al., 1997; Flavell, 2000; Selman, 1975b). Yet, substantial individual differences exist between perceivers of the same developmental stage. Our theory suggests that SPT motivation may help explain this heterogeneity. More dispositionally motivated perceivers put forth more SPT effort across more SPT attempts over time. Consequently, these perceivers should ultimately receive more evaluative insights helping them improve their SPT accuracy or possibly diversify their SPT strategies. Thus, while no consistent associations have been documented between SPT motivation and accuracy in cross-sectional and experimental studies (Ames et al., 2010; Hall, Blanch, et al., 2009), our theory suggests that sustained increases in SPT effort over time should lead to improved accuracy. Whether these types of predictions are borne out

empirically will be particularly valuable for the theory's refinement.

Prioritizing Future SPT Research

With respect to prioritizing future research, our review suggests five important foci. First, we need a much greater understanding of how well findings generalize from laboratory studies to real-world situations. This subfield has reaped immense knowledge from well-controlled experiments. Yet, a major potential threat to validity for many of these investigations is that participants are essentially supplied with SPT motivation via the context of the study—e.g., because they are paid or receive course credit. Relatedly, the utility of a SPT strategy that perceivers are never motivated to employ in the real world is unclear. However, through a greater emphasis on naturalistic studies and field experiments, we can learn what proportion of our knowledge and which particular findings generalize from laboratory simulation to perceivers' lived experiences. Qualitative approaches that build on writing exercises or interviews could be particularly fruitful here (see Gerace et al., 2013; Håkansson & Montgomery, 2003; Kerem et al., 2001). A study investigating the types of inferences that people typically aspire to make in the real world could be another promising initial step.

Second, the lack of research addressing the final phase of the SPT process was notable. More attention to how people evaluate their own SPT efforts—how they decide whether their inferences are correct or not, whether to persist or give up on a particular SPT attempt, if they need to employ different strategies, etc.—is a particularly consequential phase of the process. Furthermore, one might argue that the number of inferences perceivers make daily dwarfs the amount of feedback they get on the accuracy of those inferences. Thus, learning more about the role of feedback (or the lack thereof) in the final phase of the SPT process seems especially valuable.

Third, a number of recent studies have highlighted potential negative effects of SPT (Okimoto & Wenzel, 2011; Pierce et al., 2013; Sassenrath et al., 2016). Compared to those SPT attempts that produce more desirable outcomes, are they different in terms of SPT process? Research that can shed light on differences (or similarities) in what perceivers experience between the two seems like another important priority.

Fourth, the guiding metaphor in this article describes a tension between deliberate, thoughtful, detective-like SPT

and the need for cognitive efficiency through judge-like SPT. Scholarly work that can illuminate when, where, and under what conditions perceivers might reasonably shift towards more detective-like or more judge-like SPT will be immensely valuable for guiding the deployment and implementation of interventions to improve SPT.

Finally, our theory of the SPT process should be evaluated. Predictions like those described above can be tested. Future studies may find greater or lesser support for our four proposed phases. Scholars may argue for additional key components in some phases, or for a consolidation of factors in others. Future theorists may articulate a more parsimonious conceptualization of how the SPT process unfolds. All of these possibilities are important parts of the scientific process and will strengthen this subfield.

Improving SPT

For some researchers, but especially for practitioners working in education, counseling, law, medicine, business, and just about any other profession that requires social interaction, how to improve SPT may represent the most interesting question of all. Our theory suggests that there are two main mechanisms through which perceivers might improve their SPT capacity: by increasing their SPT effort or accuracy.

Improving SPT Effort

Focusing on the SPT motivation phase of the process might be particularly promising as a pathway for improving SPT. It is far from a foregone conclusion that perceivers will leverage whatever SPT ability that they possess across the full array of situations where engaging in SPT might be useful. The extent to which they can employ this latent ability more often, try harder, or persist for longer when they do engage in the SPT process, should benefit their social interactions. What might experiments look like that could nudge people away from judge-like habits and towards embracing their inner detectives?

One possibility is to test long-term interventions to help perceivers develop stronger dispositions towards engaging in SPT more frequently. Researchers could work in naturalistic settings—classrooms, human resources trainings, professional development sessions for doctors, for example—to try to spark greater curiosity about others, more tolerance for ambiguity or lack of closure, and an appreciation for different points of view (e.g., Jones, LaRusso, et al., 2019). Learning which interventions are sticky enough

to persist over time will be of particular interest. However, learning which interventions are so strong that targets detect differences in their interactions with perceivers may be an even more compelling outcome (e.g., Gehlbach et al., 2022).

Aside from training perceivers in different ways, interventions to structure situations or develop norms to invite greater SPT effort also seem worth testing. Can meeting facilitators or coaches craft climates that invite SPT? How participants relate to each other is another important structural feature of situations. Some research suggests that cooperative settings may facilitate greater SPT (Johnson & Johnson, 2009a). Other research shows that thoughtfully designed conflict—where participants need to put themselves in the opposition's shoes—can also be powerful SPT experiences (Johnson & Johnson, 2009b). Research that tests different situational structures and norms will be particularly helpful for settings where ongoing trainings are possible and a culture of SPT might be developed over time.

Finally, interventions that simply illustrate the potential benefits of perspective taking might provide a motivational boost. For relatively social professions (e.g., nursing or teaching), this might be a reasonable easy, compelling argument to make (Gerace et al., 2018; McAllister & Irvine, 2002). Moreover, interventions that help people see how SPT might provide a means to attaining specific relationship-related outcomes e.g., greater responsiveness in a relationship (Winczewski et al., 2016) may also be worth exploring.

Improving SPT Accuracy

Complementing these studies on SPT effort are opportunities to test ways to improve SPT accuracy. Given the promising studies such as Marangoni et al. (1995), one important line of research can focus on providing feedback to perceivers on the relative accuracy of different inferences that they make. Providing trainings on techniques to reduce the error and bias from our inferences—e.g., through strategies such as “considering the opposite” (Herzog & Hertwig, 2009; Lord et al., 1984)—also seems like a promising approach. In other words, maybe helping perceivers minimize predictable mistakes is easier than trying to improve specific SPT abilities like drawing inferences from facial expressions of emotions. Finally, many training programs have been developed over the years. For example, “social emotional learning” curricula have been proliferating across school districts recently (Jones, McGarrah, et al.,

2019). As virtual reality continues to become more prevalent and cheaper, simulations provide another promising source of training (e.g., Yee & Bailenson, 2006). Thus, program evaluation efforts to identify efficacious systems and help distill the key components of those systems will also be a helpful complement to these research efforts.

Conclusion

Given the importance of SPT to our social interactions and relationships, psychologists should have a holistic understanding of the overall process. Our theory proposes four main steps for SPT attempts—perception, motivation, strategic approach, and evaluation—with key outcomes being the amount of SPT effort put forth and the accuracy of the inferences made. To the extent that perceivers can behave more like detectives by collecting more information about their target, entertaining multiple hypotheses about what the target might be thinking or feeling, and withholding judgement for longer, they are likely to reap greater benefits from SPT.

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