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#### COMMENTARIES



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## How Behavioral Reasoning May Further Explain the Belief-to-Behavior Connection: Exploring the Role of Primary Reasons, Counter Reasons, and Comparative Reasoning Facets

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The study of human behavior and its underlying mechanisms remains the cornerstone of psychological science. One key aspect of this examination is to understand how specific beliefs or cognitions may influence, motivate, or sustain attitudes, intentions, and behavior. In this pursuit, Granados Samayoa and Albarracín (this issue) have eloquently stated that psychological theorizing has lacked an adequate understanding of the belief-to-behavior connection. In response, they presented a groundbreaking framework and called for "a deeper exploration of how and when beliefs influence behavior" (this issue, p. 17). We agree with this key observation and have noted this same lack of attention nearly two decades ago (Westaby, 2005). To illustrate, the vast majority of behavioral prediction researchers that have employed the pioneering theory of reasoned action (TRA; Fishbein & Ajzen, 1975) and the seminal theory of planned behavior (TPB; Ajzen, 1991) have focused on how behavior and intentions are predicted by the global measures of attitude (e.g., a global attitude about purchasing product Y), subjective norms (e.g., people important to me think I should purchase product Y), and perceived control/self-efficacy (e.g., it is easy for me to purchase product Y) (Bandura, 1991). Much less attention has focused on the context-specific beliefs and reasons that underlie the global perceptions (e.g., the expectancy, value, strength, or importance ratings related to the beliefs or reasons about product Y's cost, reliability, esthetics, resale value, etc.). We surmise that this has likely been due to the lengthier surveys that are required to present all of the beliefs (and/or reasons) and their corresponding measures. However, this lack of attention is somewhat ironic, because it has consistently been proposed in the main behavioral intention theories that the belief-based components are critical to understand the root causes of behavior, which can provide key insight into the specific mechanisms for behavioral change (Fishbein & Ajzen, 2010).

In line with Granados Samayoa and Albarracín's (this issue) belief-to-behavior inference model, which we will occasionally refer to as the BBI model simply for brevity, we also believe there is great potential to further unpack how

specific beliefs can have direct effects on behavior or intentions. This also fits with decades of research in decision science that has demonstrated that individuals process decision attributes, beliefs, or reasons in many different ways that can directly impact decisions, depending on the context (Artinger et al., 2015; Payne et al., 1988; Weber & Johnson, 2009). For example, these different approaches can range from heuristic and simple algorithms (e.g., belief accessibility and representativeness effects, elimination by aspect processing, and system 1 thinking) to more complex normative ones (e.g., expectancy x value modeling, multiattribute decision making, and system 2 thinking) (Anderson, 2013; Bhatia & Stewart, 2018; Feather, 1982; Kahneman, 2003; Oaksford & Chater, 2020; Rips, 1990; Simon & Read, 2023). Hence, going beyond the prediction of decisions alone, the BBI model has potential to uncover new insights for the even more challenging goal of predicting subsequent behavior over time. Here is an important question in this context: If tested competitively, to what extent are the core principles of the BBI model expected to account for greater variance in specific decisions or behaviors than traditional models?"

Moreover, we found it very encouraging that Granados Samayoa and Albarracín (this issue) called for more research examining the "practical reasoning" that may underlie behavioral formation, although the exact nature of what practical reasoning meant was not yet fully addressed nor differentiated from belief processing in the current BBI model. Such an examination could provide many opportunities for psychological science to unpack new insights into how the mind practically reasons with beliefs to impact decisions, intentions, and ultimate behavior. This would also reach beyond the multiplicative algorithmic approaches of the belief-based components employed in traditional intention theories. It is also here that we believe that the original work on behavioral reasoning theory (BRT; Westaby, 2005) could be further advanced to better explain the different facets of behavioral reasoning that could be involved in such practical reasoning, which heretofore has not been sufficiently explored. This would go beyond BRT's original prop-

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osition about how reasoning for and reasoning against behavior serve as the critical mediators between beliefs, attitudes, intentions, and behavior: beliefs and values  $\rightarrow$  behavioral reasoning  $\rightarrow$  attitudes  $\rightarrow$  intentions  $\rightarrow$  behavior, with direct effects from behavioral reasoning to intentions. Although the BBI model did not address nor integrate BRT, which is very understandable given Granados Samayoa and Albarracín's (this issue) vast integration of belief-related research alone, we explore some initial conceptualizing and questioning below to provide additional perspectives and integrations to potentially further advance the explanatory mechanisms between beliefs and eventual behavior.

#### Behavioral Reasoning Facets and the Belief-to-Behavior Interface

While the original BRT focused on basic elements of primary behavioral reasoning, we suggest that a much deeper understanding of the larger practical reasoning process could be leveraged through a multifaceted BRT approach that could also include new counter reasoning and comparative reasoning facets along with additional recursive effects that were not articulated in the original theory. With connections and commentary related to Granados Samayoa and Albarracín's (this issue) model throughout, we first address the interface between beliefs and primary reasoning, followed by new conceptualizing about counter and comparative reasoning facets that we believe helps further explain practical reasoning about behavior. These three facets-primary reasoning (with primary pro and con orientations), counter reasoning (that account for how individuals may challenge their own reasons), and comparative reasoning (that capture how individuals compare their reasoning sets)-form key components in a potential multifaceted behavioral reasoning theory (MBRT) approach to understand how beliefs may relate to practical reasoning, which in turn relates to attitudes, intentions, and eventual behavior.

#### **Primary Reasoning**

To provide some brief background about the original behavioral reasoning approach, behavioral reasons were defined as the "... subjective factors people use to explain their anticipated behavior" (p. 100), although they could be used to explain previous or ongoing behavior as well (Westaby, 2005). Reason cognitions fall within two superordinate dimensions according to the theory: Reasons for the behavior and reasons against the behavior, which we also refer to as primary pro reasons and primary con reasons, respectively, for simplicity and clarity. These concepts have been well differentiated and provided unique insight into the explanation of attitudes, subjective norms, perceived control, and intentions in multiple studies (e.g., Richetin et al., 2011; Wagner & Westaby, 2020; Westaby, 2005; Westaby et al., 2005; Westaby et al., 2010; Westaby & Rosemarino, 2024).

Primary pro reasons represent the initial specific subjective factors individuals use to explain why they may approach, be drawn to, or feel favorable toward a behavior (or an attitude object), thereby being generally grounded in the rich literature on approach motivation (Elliot et al., 2025), albeit through a multiple reason lens. From this perspective, these primary reasons should be activated more rapidly in relation to behavioral mediators, such as attitudes and intentions. This raises a key question: Does the "practical reasoning" outlined in Granados Samayoa and Albarracín's (this issue) Principle 1 align more closely with primary reasoning than with other forms of reasoning? We suspect that it does, particularly when contrasted with the counter-reasoning facet described below. This distinction further underscores why multiple facets may be necessary to fully capture the complexities of belief-to-behavior connections through practical reasoning approaches.

Some pro reasons may also represent the broader "why" that individuals have for engaging in a behavior, which was not clarified in previous theory nor is it yet addressed in the BBI model. For example, a person who states "to be healthy" when thinking about reasons to exercise over the next week likely has "being healthy" as a broader motivation, aspiration, or higher-level goal in their life space. This highlights the hierarchical nature of motivation, with more specific, proximal reasons embedded in more general, distal reasons or motivations (Cacioppo & Berntson, 1994; Elliot, 2006). Could BBI propositions also make related connections?

In contrast, primary con reasons represent the initial specific subjective factors people use to explain why they may avoid, turn down, or be against a behavior (or an attitude object), thereby accounting for the rich literature on avoidance motivation (Elliot et al., 2025). Primary con reasons can also capture the perceived inhibitors and environmental constraints that impact one's behavior (Westaby, 2005). For example, a person may recognize a constraining factor as to why they may not exercise on a given day, which can impact their intentions, such as "I don't have time today." The differentiation of primary pro from primary con reasoning is also critical scientifically, given decades of research that has found that approach motivation (and related concepts such as promotion orientation or gain focus) have different effects on decision-making processes and outcomes than avoidance motivation (and related concepts such as prevention orientation or loss focus; Elliot & Covington, 2001; Higgins, 1997; Kahneman, 2003). Affect, cognition, and behavior grounded in approach motivation are commonly accompanied by excitement, eagerness, challenge appraisal, and flexibility, whereas that grounded in avoidance motivation are commonly accompanied by anxiety, vigilance, threat appraisal, and rigidity (Cacioppo & Gardner, 1999; Carver & Scheier, 2001; Elliot & Friedman, 2007). Although Granados Samayoa and Albarracín (this issue) briefly mentioned the approach/avoidance distinction in relation to evaluation and emotion, it would be very interesting for future applications of their model to account for other potential interactions between their belief mechanisms and the approach/avoidance distinction.

There are other potential fruitful integrations of BBI with BRT. This lies in Granados Samayoa and Albarracín's (this issue) novel typological classification of existence,

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descriptive, and outcome beliefs, which they uniquely grounded with innovative meta-analytic support (Albarracín et al., 2024). As for its potential connection to behavioral reasoning, for example, would behavior also be better predicted by more outcome-based reasoning sub-classifications? Previous work on BRT has not made such sub-classification predictions. Furthermore, in terms of the connection to descriptive beliefs, could primary con reasoning be more frequently characterized with more avoidance control-oriented reasons, thus adding more nuance to the control belief concept from the theory of planned behavior (e.g., "The reason I can't go to the event is because I have something else scheduled")? Considerable existing data from past research could provide a foundation for exploring how the BBI model typology relates to primary pro versus con reasoning dimensions.

From a BRT perspective, individuals are presumed to form and sustain attitudes and intentions when they can access or find justifiable, defensible, or strong reasons for or against a given behavior. In the context of attitude and intention formation (Fazio et al., 2004; Schwarz, 2007), when such subjective reasons are found, whether objectively accurate or not (Simon & Read, 2023; Westaby & Fishbein, 1996), attitudes and intentions can be formed and solidified, until new information is encountered that may challenge the status quo.

As for the interface with beliefs, an individual's search for justifiable, defensible, or strong reasons can result in their scanning and accessing a wide array of cognitions related to a given decision (e.g., beliefs, outcomes, values, feelings, goals, alternatives, or perceived consequences), depending on the time and focus available (Keinan et al., 1987). Hence, it is from this larger body of beliefs that justifiable, defensible, or strong reasons can either be identified or formed to support a given attitude or intention. For example, when considering whether to buy product Y, a person may have a vast number of beliefs about Y's cost, quality, convenience, durability, esthetics, reputation, etc. However, the person may quickly reason that because Y has adequate quality (pro reason A), they need it soon (pro reason B), and it being one of the few products left in stock (pro reason C), they intend to buy product Y now (intention). Note that the last two reasons were also newly configured based on the context of the current decision and thus were not part of the original set of beliefs about the product, thereby conceptually illustrating how ultimate reasons can be differentially formed separately from initial belief structures in the process of behavioral reasoning during decision making. Simply stated, beliefs about a behavior do not always equal the reasons for the behavior. However, one can also see that one of the initial beliefs (i.e., "quality"), albeit slightly reframed when used as a reason (i.e., "adequate quality"), served as a critical antecedent to the reasoning process, thereby logically illustrating its antecedent role in the belief-to-behavior process. Past work on BRT has also established that belief-based concepts predict both primary pro and con reason strength scales (e.g., Wagner & Westaby, 2020; Westaby, 2005). Interestingly, in terms of integrative thinking, could

Granados Samayoa and Albarracín's (this issue) principles about response latencies inform predictions about how many primary reasons are eventually utilized from the larger constellation of beliefs individuals have? Could this also connect to their fourth principle about cognitive capacity and goals? For example, would stronger belief-to-primary reason overlap manifest when individuals have greater time for reflection/contemplation along with the motivation and goal for such reflection?

Let us consider a more dynamic decision-making example that also illustrates why beliefs and reasons may need to be differentiated, while also allowing them to work together to explain finalized intentions and behavior: 1. I heard that the weather is going to be a little cooler than usual today (belief A); 2. I wonder if I should take a jacket to work? (intention query with uncertainty); 3. Well, because I'm going to be indoors most of the day (new con reason A) and because my lightweight jacket is still at the cleaners (new con reason B), I am not going to take any jacket today (intention shift into certainty); and 4. The person leaves home without taking any jacket (behavioral implementation). Theoretically, this illustrates how real-time beliefs can trigger intention queries followed by recursive behavioral reasoning search and formulation, which then results in the clarified reasons to justify a shifted and solidified intention followed by behavioral implementation (Gollwitzer, 1999; Gollwitzer & Sheeran, 2006). This showcases the tight cognitive connections that can form quickly between new beliefs, real-time behavioral reasoning, intention formation, and behavior.

What about salient beliefs and their effect on behavior? From a BRT perspective, because a smaller set of primary reasons result or emerge from a potentially much larger constellation of beliefs, it is these primary reasons that would be theorized to be more "salient" in the decisionmaking and behavioral formation process. This is important to address and debate, especially given that Granados Samayoa and Albarracín's (this issue) conceptualizing indicates that "salience" remains an important explanatory factor, which extends Fishbein and Ajzen (1975, 2010) original theorizing about the importance of salient beliefs on attitude and subjective norm formation in the theory of reasoned action. The importance of salience is also maintained in the widely impactful theory of planned behavior, which includes perceived control and underlying control beliefs (Ajzen, 1991); its carry-over is also implied in the newer applications of TPB in the theory of reasoned goal pursuit (Ajzen & Kruglanski, 2019).

However, there are observable cognitive limits of primary behavioral reasoning. For example, past research found that belief-based concepts (e.g., based on expectancy x value theory) predicted attitudes beyond the primary reasoning components (e.g., Wagner & Westaby, 2020; Westaby, 2005), although the reasoning components played a stronger role in prediction. As proposed in BRT, this suggests that people's specific reasons do not always capture the influential factors driving their attitudes, which accounts for research indicating potential inaccuracies in reason introspection (Wilson & Schooler, 1991). We also wonder if propositions from Granados Samayoa and Albarracín's (this issue) model could elucidate more precise mechanisms about how this may be happening?

#### **Counter Reasoning**

Although Westaby et al. (2010) proposed that counterarguments may be involved with the reasoning process, little substantive theory has advanced such a proposition in the context of attitude, intention, and behavior formation and its potential differentiation from primary reasoning. To explore this possibility, we presume that counter reasoning captures whether or not individuals perceive valid counterarguments to their own primary reasoning, such as through self-reflection or from external sources (e.g., social interactions, group decision-making, or online/A.I.-based information) (Westaby et al., 2014, 2016). Counter reasoning can often serve a functional role in refining the reasoning process and addressing potential uncertainties in the environment, especially if the new arguments have superior accuracy or trigger more elaborate processing that better informs the decision or strengthens attitudes (Petty et al., 2014), while avoiding excessive over-analysis. However, as Granados Samayoa and Albarracín's (this issue) recognized in the context of belief research, "well-elaborated beliefs do not always affect behavior and require particular goals to do so" (p. 36). With counter reasoning, the implied goal is to consider additional information that may help correct a potentially faulty primary reason, thereby potentially serving this goal function, which future integrative work with BBI could examine.

Consider the following example of a counter reasoning situation: Even though an individual may quickly have a salient primary reason for going to a professional after-work event, such as "I will be able to expand my network," the person may also quickly recognize a valid counterargument to their own initial and salient primary pro reason: "However, the last two times I went to one of these events I didn't meet anyone new." Technically, counter pro arguments represent the counter reasoning positions that challenges an individual's primary pro reasons. More generally, it reflects motivated reasoning "against" the behavior in line with the broader "reasoning against" dimension in BRT along with avoidance distinctions from motivation theory (Elliot et al., 2025). In contrast, counter con arguments represent the counter reasoning positions that challenges an individual's primary con reasons. Correspondingly, this represents situations when individuals engage in further reasoning processes "for" the behavior and thus, more generally, oriented toward approach motives. Such conceptualizing illustrates that approach and avoidance can function in more complex ways than traditionally examined. For example, an approach pro reason can be offset with a counter pro reason, thereby resulting in both an approach and avoidance stance for the single motivational approach reason factor (see Lewin, 1935, and Miller, 1944, for classic work on approach-avoidance conflict and Tetlock, 1986, for work on integrative complexity). However, such conceptualizing has not received sufficient attention in reason and beliefbased research and future connections with Granados Samayoa and Albarracín's (this issue) model could be fruitful.<sup>1</sup>

Theoretically, counter reasoning may be expected to contribute to the prediction of attitudes, for example, because it (1) may account for the importance of counterfactual thinking in judgment, decision making, and accountability (Roese, 1994; Tetlock, 1998), (2) addresses additional argumentation processes that may impact attitudes (Albarracín, 2002; Hass & Linder, 1972), (3) manifests potential positive defense processes (Nenkov & Gollwitzer, 2012), and (4) corrects some of the introspective limitations of people's initial primary reasons (Wilson & Schooler, 1991). The latter point is particularly important to illustrate, because individuals' own counter reasoning may help reduce inconsistencies in their initial primary reasoning, which has not been accounted for in the literature on introspective reasons.

Westaby and Rosemarino (2024) have also empirically found that counter reasoning contributes to the prediction of behavioral attitudes in conjunction with primary reasoning. However, primary reasoning demonstrated a relatively stronger effect, as one may predict, given that primary reasons are expected to be more salient in the decision-making process. This may also mesh with Granados Samayoa and Albarracín's (this issue) model where increased salience and practical reasoning (if presumed to reflect more primary reasoning) would be expected to correspond more closely to behavioral prediction in line with Principle 1 in the BBI model. Moreover, in regards to discriminant validity, Westaby and Rosemarino (2024) found that the counter reasoning aggregate scales manifested low associations with their motivationally corresponding primary reasoning scales, suggesting that they are separate psychological constructs. This can even be seen in a simple example: Imagine that a person states the following primary pro and primary con reasons for staying in a relationship: A lot of fun times, but I need to focus more on my career, respectively. However, when asked if they have any valid counterarguments to "A lot of fun times", the person may state, "some of those times were too risky." This does not parallel the "I need to focus more on my career" response, which was the person's initial primary con reason, thus illustrating conceptual differentiation in this specific case. That is, more unique cognitive elaboration occurred through counter reasoning.

<sup>&</sup>lt;sup>1</sup>There are various ways to assess counter reasoning. For example, a simple method could ask participants: "In terms of this decision, how likely could you (or others) think of any valid counterarguments for the following pro reason you mentioned earlier: cperson's earlier reason statement inserted> (Not likely—Very Likely). Such scores could then be aggregated across all items to create a counter pro argument scale. If qualitative content is desired, researchers could also ask individuals to state the valid counterarguments that they (or others) might have for each of their reasons, if any, as well as additional influence ratings of those counterarguments. Complex methods may be more relevant when studying deeper system 2 thinking (Kahneman, 2003) for important real-life decisions for individuals and groups (Camilleri, 2023), whereas simpler methods may be more pertinent in large sample behavioral studies where survey length is a concern.

### **Comparative Reasoning**

Comparative judgment has long been espoused as important in human choice (Handgraaf et al., 2003) and overlaps with Shafir et al.'s (1993) notion that "people employ both absolute and comparative strategies that are subsequently combined to yield a choice" (p. 325). While primary and counter reasoning can account for the absolute number or strength of primary reasons or counter arguments, they do not explicitly account for comparative reasoning perceptions. Moreover, neither Westaby's original theorizing, traditional behavioral intention theorizing, nor Granados Samayoa and Albarracín's (this issue) novel model explicitly address how individuals may be comparing their various beliefs or reasoning sets and how this may impact attitudes and behavior. Hence, to advance such possibilities, we explore the concept of comparative reasoning. From a multifaceted BRT perspective, this would represent an individual's overall perception that their set of reasons for a behavior (or attitude object) are more important or influential in their decision making than their set of reasons against the behavior (or attitude object), or vice-versa.<sup>2</sup> As an intuitive example, one can see the comparative reasoning process when people make general comments about their summarized reasoned explanation for a potential behavior, such as "My reasoning for X outweighs my reasoning against it" or "My reasons for X are more important in my decision making than my reasons against X", both of which demonstrate a comparison between the broader reasoning sets. Although it seems that a difference rule (i.e., pro-con reasons) should equate to this comparative reasoning perception and perhaps even be perfectly correlated (Velicer et al., 1985), recent research shows that this is not the case at all, demonstrated by correlations nowhere near unity (Westaby & Rosemarino, 2024). That is, people can often focus on critical aspects within their reasoning sets to determine that one set of reasons (either pro or con) will be more important or influential in their decision making, even though this perception may significantly differ from the individual's total number of respective reasons or their summed strength. To illustrate, building from one of our earlier examples, a person may have five reasons to exercise this month (e.g., to be healthy, to get fit, to live longer, to look better, to be more agile), many with very high weightings for importance, influence, or perceived strength, and only one reason to not exercise this month (e.g., recovering from an injury). However, that one con reason against exercising may be perceived to be more important or influential in their overall decision making, even though the person had many more pro reasons with a stronger overall pro reason score. This may also uniquely contribute to the prediction of the person's attitudes, intentions, or behavior over and above the number or strength of the summed pro and con reason scales (or average strength).

Theoretically, the comparative reasoning variable also fits with Pennington and Hastie (1992) theorizing which states that when strong explanations are synthesized together and endorsed in a compelling story (i.e., in a set of interrelated reasons for versus against the behavior in our multifaceted BRT extension), it can strongly influence final decisions. Moreover, we conjecture that perceiving a strong overall explanation can satisfy the need for closure, which can be a powerful motive in human judgment and decision making (Kruglanski & Webster, 1996) and potentially mitigate adverse effects of inaction (Albarracín et al., 2019; Albarracín & Handley, 2011). Recent findings from Westaby and Rosemarino (2024) also demonstrated the independent predictive validity from multi-point comparative reasoning scales to attitudes and intentions. Moreover, primary and counter reasoning predicted comparative reasoning perceptions, which research needs to further examine as well as hypothesize various mediational pathways.

# Recursive Pathways, Post Hoc Rationalizations, and Automaticity

Granados Samayoa and Albarracín (this issue) importantly note the role of recursive processes "in which the outcome of a behavior can also influence people's beliefs and subsequent belief-to-behavior inferences" (p. 6).<sup>3</sup> This is also consistent with original propositions in BRT, which proposed a powerful post hoc recursive and rationalization effect from behavior back to reasoning, which can be motivated through postdecision dissonance reduction (Knox & Inkster, 1968), social intuition effects (Haidt, 2001), or attractor dynamics toward a behavioral state (Vallacher & Nowak, 1994). Notably, once individuals engage in a behavior, they are more likely to form even stronger reasons to support the behavioral direction. This can be functional to build commitment and stay focused in a world of options and beliefs, but it can also be dysfunctional when people over commit to courses of action that do not result in desired outcomes.

However, there may be additional recursive effects that are not accounted for in the original BRT. This is an important issue given the potency of automatic encoding in Granados Samayoa and Albarracín's (this issue) framework as well (e.g., via principle 5). For example, consider the common situation when an attitude is accessed automatically without any antecedent re-processing, such as those acquired after repetitive encoding and reinforcement (Powell & Fazio, 1984). In other words, an attitude or feeling about a given object or situation simply comes to mind without any effort. This can be functional to reduce cognitive load, but may also be impacted by environmental primes (Bargh & Chartrand, 1999). However, when prompted to reflect on one's attitudes (e.g., why do you feel that way?), individuals would be expected to either (1) attempt to recall and report their original reasons for or against the attitude, (2) generate

<sup>&</sup>lt;sup>2</sup>This could also include fully crossed pairwise reason comparisons, although this is more laborious. Hence, it is often more practical for individuals to reflect upon and compare their pro versus con reasoning sets in large applied behavioral prediction studies.

 $<sup>^{3}</sup>$ They also observed the situation when inverse inferences can occur, such as "an inference in which the conclusion affects the premise" (p. 8), drawing on Wyer and Albarracín (2005).

a new set of reasons to support their currently accessible attitude to maintain consonance, which could be impacted by environmental primes as well, or (3) change the activated attitude based on new context-specific reasoning, potentially influenced by counterarguments or novel information that modifies their underlying beliefs or decision context, in line with belief-updating models (Sommer et al., 2024) or shifting attractor dynamics (Scherbaum et al., 2016). A similar process can be presumed for intentions, where intentions can also be stored in memory over time and accessed automatically by various conditions (Brandstätter et al., 2001). However, as a supplement to the BBI model, individuals would not be expected to recall all of the beliefs they have in relation to the attitude object. They would be expected to focus on the salient primary reasoning in their explanation.

Additionally, recursive effects may even occur on beliefs or feelings themselves. For example, a person may suddenly become aware of a belief they have and then reflect on why. This can result in either the continuance of the belief (based on original or consonance-motivated reasoning) or its modification (based on new counterarguments, information, comparisons, belief associations, or further refined reasoning). An important question in relation to the BBI model is whether or not such behavioral reason reflections, when formed with an automated proceduralized connection to act (BBI Principle 6), triggers stronger beliefs-to-reasons-tobehavior connections than situations when reasoning reflections do not occur. This may even be indirectly supported by research on counterhabitual implementation intentions that have been shown to sustain behavioral change (Adriaanse et al., 2011; Gollwitzer & Bargh, 2005).

Although Granados Samayoa and Albarracín's (this issue) modeling provides one of the most exhaustive treatments of beliefs in contemporary psychological science, it would also be valuable in future extensions to examine how their framework could be integrated with higher-level belief, motivation, and personality structures. A similar argument applies to work examining BRT or its multifaceted extension. For example, how do individuals' higher-level psychological dispositions (or beliefs about oneself), such as being optimistic or having an approach temperament or promotion orientation in life (Elliot & Thrash, 2002; Higgins, 1997; Scheier & Carver, 1985), impact specific behavioral belief structures and behavioral reasoning? For example, do individuals with such inclinations tend to frame important life decisions and behaviors more often in positive, appetitive, or promotion-based ways (e.g., Should I stay at my job? versus Should I quit my job?) and do they then have a greater tendency to focus on "reasoning for" than "reasoning against" dimensions on approach-related decision frames? Moreover, do the specific dispositions that reasons are embedded in continue to have an influence on the links between reasons and downstream attitudes, intentions, behaviors, and recursive beliefs? (e.g., perhaps optimism not only increases the likelihood of generating "reasons for", but leads to more positive expectations for the downstream intentions; for related ideas see Murray's (1938, p. 123-124) concept of "need integrate" and Elliot and Thrash's (2001, p.

148) concept of "goal complex"). Future model building could also examine situations when the behavioral reasoning process for one decision under consideration triggers the awareness of another decision option that may better help individuals achieve larger goals in their lives with stronger sets of justifiable reasons with underlying beliefs (thereby potentially nullifying the initial decision query or making it no longer relevant). Further integration of Granados Samayoa and Albarracín's (this issue) innovative framework with behavioral reasoning, such as connecting the underlying reasoning involved in the formation of behavioral goals in the first place within their flowchart model, may also help illuminate deeper dynamics of human behavior and the cognitive processing involved in behavioral implementation. In all, there are many fascinating new avenues for psychological science as it traverses the divide between specific beliefs, reasoning, and their pathways to behavior and beyond.

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