Beyond Social Exchange Theory: An Integrative Look at Transcendent Mental Models for Engagement

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Abstract: In this paper, we develop an integrative conceptual framework capturing the underlying mental models that guide engagement in relationships at work and elsewhere. Specifically, we are looking at mental models that go beyond egocentrism and social exchange, which have served as the basis for most frameworks found in research on organizations. The goal of this paper is to present a more complex picture of human cognition and behavior that suggests that egocentrism is not an exclusive motivator. We view this more integrative framework as a set of concentric circles of increasingly inclusive and expansive identities. Although the mental models used by individuals may be static over a shorter time frame, they are thought to be more dynamic over a relatively longer timeframe, in adaptive response to changing conditions. Movement between these mental models can be triggered by changes in cognitions as well as by events that arouse affect.

Keywords: mental models, cognition, positive organizational scholarship, transcendent spirituality

Introduction

Mental models are internal representations of reality held by individuals to guide interactions with external objects or systems (e.g., Jones, Ross, Lynam, Perez, & Leitch, 2011; Rouse & Morris, 1986). This paper conceptualizes an integrative framework outlining the mental models that might underlie various forms of individual and organizational engagement, thereby presenting a more complex picture of human cognition and behavior than has been typical in existing research on behavior in organizations. Drawing on recent research on top-down and bottom-up mechanisms in emotion generation (Oschner, et al., 2009), we also describe the interplay between cognitive and affective processes that shape such mental models.

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The concept of mental models developed in large part in the literature on manual control in terms of psychomotor performance (e.g., Conant & Ashby, 1970) and was later adopted by cognitive psychologists, who conceptualized mental models as descriptions of a system's form, in terms of relationships among components, functioning, and dynamics (e.g., Mathieu et al., 2000). These descriptions are thought to allow individuals to form expectations for what is likely to occur next and decide what actions to take (e.g., Mathieu et al., 2000; Rouse & Morris, 1986). For example, teammates often share agreed upon mental models of important aspects such as the group task and team operations (e.g., Mathieu, Heffner, Goodwin, Salas, & Cannon-Bowers, 2000; Maynard & Gilson, 2013). Similar team mental models allow members to predict what their teammates will need and will be doing, facilitating coordination activities (Mathieu, et al, 2000), which then leads to improved performance (Lim & Klein, 2006).

However, mental models vary in accuracy and development, in part due to the experience of the individual with the system being described by the mental model, which might be too limited to completely portray a complex system (for discussions, see Rousseau, 2001 and Jones et al., 2013). Furthermore, our minds are full of conflicting mental models since we tend to maintain overlapping and inconsistent mental models (Lane, 1992). In part this is because these models are context-dependent and may change depending on the situation (Jones et al., 2011). Also, our mental models can be expected to be fairly resistant to change, given that individuals tend to focus on information that supports existing beliefs (e.g., Swann & Read, 1981). Individual mental models will change when individuals are motivated to more deeply process information that is discrepant with their models rather than stick with the tendency to superficially assess and discount it (e.g., Rousseau, 2001). Still, mental models tend to change slowly rather than suddenly (e.g., Welch Larson, 1994).

An example of a mental model guiding human behavior and interactions that has been slow to change is the assumption that much of human behavior is based on ego-centrism and social exchange. In fact, this model has served as the basis for most theoretical approaches found in research on organizations, given that much of our research on work behavior is based on models of social psychology. These models mostly view social exchange as an economic choice among alternatives in which individuals attempt to maximize their expected utility (Kahan & Rapaport, 1984; Sunahara & Pierce, 1982). Although these mental models have been useful in generating research on human behavior, these efforts may have reached maturity. Assuming human work behavior is primarily egocentric in nature, has the potential for missing behavior that is not egocentric. Atypical behaviors that do not fit neatly into the mental model of egocentricity are not likely to be examined or even noticed.

Therefore, in this paper, we consider mental models that are broader. Drawing on existing literature, we have built an integrative model of engagement, which we view as a set of concentric circles of increasingly inclusive and expansive identities, thereby extending the understanding of human cognition and behavior to include motivations beyond egocentric social exchange. The first or innermost circle is based on ego as one's identity and social exchange theory as the operating mental model for human interaction. In the second circle, we look at a mental model based on a group or tribal identity that shares interests, passions, and affective bonds including organizations, industries, and even virtual groups. The key feature of this circle is the suspension of the usual social exchange norms and extension of benevolence to those who

are part of the group. The third circle describes a transcendent mental model that involves moving from a primary concern for the tribe and temporary prosocial behaviors directed at outsiders to experiencing enduring changes in an individual's concern about others' welfare leading to a sense of oneness and a merging of self-other boundaries.

Specifically, this paper makes two contributions. First, by using the top-down and bottom-up approach to emotions, it broadens the scope of mental models to include the role of the 'affective' component in a mental model and describes the interplay between cognitive and affective processes that underlie a mental model. Second, by describing the mental models underlying the three circles and the mechanisms of movement between them, this paper illuminates how more expansive mental models can produce a more complex cognitive response to phenomena. By doing this, it also offers the beginnings of a blueprint for how to shift mental models at a collective level. It should be noted that, although researchers have worked on multi-level research (e.g., Rousseau, 1985), they have not explicated the mental models that individuals and organizations operate from in their interactions with each of these levels. For example, often individuals and organizations are completely unaware of and indifferent to factors at larger levels, such as social structures, that are affecting them, instead operating from a very local point of view. Their lack of awareness of and indifference to factors operating at larger and more complex levels negatively impacts their ability to solve problems directly affecting them.

We begin with a brief review of the literature on mental models. We also describe the key elements that go into the making of mental models and the relationship between the various elements. We then describe and discuss our integrative model for engagement and its three circles in detail and speculate how the various mental models may interact with each other.

Making of Mental Models

The key elements that we believe contribute to mental models of appropriate social behavior are cognitive framing (particularly social identity) and affective arousal. We have identified the two processes based on recent brain research (Ochsner, et al., 2009) that suggests that emotions can be generated through either cognitive constructions and interpretation that lead to emotions or through the experience of immediate affect which then can leads to cognitions. Poonamallee (2012) uses this framework to describe the role of socio-ecological values and the interplay between cognitive framing, and affective arousal elements in the rousing of compassion to strangers during disasters. In this paper, the author demonstrates how in the case of the Asian Tsunami, cognitive framing of the society and the affected populations as well as the emotional valence and portrayal of the disaster stories by the mass media (and by proxy, the society itself) influenced the construction of a collective identity, thus rousing compassion towards strangers.

We conceive of mental models as being generated either cognitively through top-down processing or affectively through bottom-up processing or through complex interactions between both systems. The particular triggers that affect which process occurs will be considered later. At this point, however, we simply wish to introduce the top-down and bottom-up components. Research suggests that individuals' interactions with others are affected by both cognitions and affect. For example, although some scholars view social identity as purely cognition based (e.g., Ashforth & Mael, 1989), others have defined social identity as a part of self-concept derived

from both the knowledge of group membership as well as the emotional significance of that membership (e.g., Tajfel, 2010). Furthermore, research indicates that affect can be more predictive of group behavior than cognitions. Van Zomeren et al. (2008) found that affective injustice had stronger effects on collective action than non-affective injustice. It is thought that group-based affect helps link group cognitions to group action (e.g., Van Zomeron et al., 2008; Yzerbyt, Dumont, Wigboldus, & Gordijn, 2003). Therefore, it is likely that mental models that are shared by a group, such as those concerning collective action, have both cognitive and affective components, with group affect sometimes influencing group cognitions and vice versa. For this reason, we expect that even group-based mental models that are influenced heavily by cognitions such as social identity can be strongly influenced by affective variables as well.

Top-down Mechanism: Cognitive Framing

We begin our discussion by considering the cognitive framing aspect of mental models. Although most mental models are probably fairly developed (although perhaps incomplete) representations of systems that allow one to interact appropriately with those systems, most probably took their initial forms with a basic view point, or frame, that served as a guideline for the construction of the mental model. Frames are cognitive structures that focus, articulate, and transform, which operate at both the individual and group levels (Snow, 2007). Frames are essentially central organizing ideas that can steer an audience by providing particular meanings, thus operating as interpretive mechanisms (Gamson & Modigliani, 1987). They are influenced by reference points and carry this information (McKenzie & Nelson, 2003). Campbell (2006) describes frames as: "*metaphors, symbols, and cognitive cues that cast issues in a particular light and suggest possible ways to respond to these issues. Framing involves the strategic creation and manipulation of shared understandings and interpretations of the world, its problems, and viable courses of action*" (Campbell, 2006, p. 48-49). Although some literature on framing includes the affective aspect, in this paper, we use Campbell's definition of framing as a cognitive mechanism to distinguish it from the process of affective arousal.

Understanding the effect of framing has been useful in a variety of literatures. For example, framing perspectives in the social movement's literature emerged in response to the void in exploring the relevance of interpretive processes for mobilization (Snow, 2007). It is also used by disaster researchers (Argothy, 2003; Cottle, 2006; Hoijer, 2004; Rodriquez, Trainor & Quarantelli, 2006; Tierney, Bevc & Kuligowski, 2006). In this literature, frames are thought to both empower and limit reality and have the power to provide edited or fragmented versions of reality (Argothy, 2003). Framing has also been examined in organization studies and management, such as with positive and negative framing in decision-making contexts (e.g., MacKenzie & Nelson, 2003) and in discussions of sense-making (Weick, 1995) and sensegiving (Gioia & Chittipedi, 1991; Maitlis, 2005) processes. Additionally, decision framing has been applied to understand effects such as individual judgments about organizational justice. Positive frames, for example, are thought to reduce the need for sense-making of outcomes received, thereby reducing the importance of procedural justice (Brockner, Wisenfeld, & Martin, 1995). Additionally, it has been found that individuals make sense of procedural justice differently depending on whether they identify strongly or weakly with a particular group (Tyler, 1999).

A frame of particular importance to mental models for interaction and engagement is social identity. Framing processes play a critical role in the development and maintenance of individual and collective identities (Hunt, Benford, & Snow, 1994). Social identity is that part of self-concept that is defined by membership within a group (Tajfel, 2010). People classify themselves and others into social categories, in part to be able to define and order the social environment and in part, to locate and define themselves Ashforth & Mael, 1989; Turner, 2010). People seek to maintain a positive social identity to boost self-esteem, such as by making comparisons with out-group members (Tajfel & Turner, 1986). Social identity theory has helped explain in-group bias and out-group stereotyping among other group behaviors (Brown, 2000). But these identities can affect individual framing and behaviors as well. Identifying with a group leads to individual behaviors supporting the group's behaviors and its values and norms (Ashforth & Mael, 1989). For example, through perceptions of group-based deprivation, social identity can help mobilize people for collective action that benefits group members, which is unlikely to occur through egoistic (individual-based) deprivation (Drury & Reicher, 1999; Van Zomeren, Postmes, & Spears, 2008). On the other hand, since social identity also can also lead to major social conflicts between in-group and out-group members, it has been suggested that policies that redirect people to have more overlapping and inclusive identities are needed (Brown, 2000).

Bottom-up Mechanism: Affective Arousal

The second major element thought to affect the construction of mental models is affective in nature. The heart of emotion has also sometimes been called core affect, which refers to a primitive, universal and irreducible subjective experience consisting of both a pleasure-displeasure dimension and an arousal dimension (Russell, 2003). Emotions help guide goal-directed human behavior, allowing people to adjust to environmental changes because they signal when an important goal is threatened and needs attention (Kaufman, 1999). Among other things, emotional arousal is a key element that guides people's engagement with others, thanks in part to evolutionary processes, which helped create a central nervous system that responds to the complex social world of primates via emotional processes such as empathy (Brothers, 1990; Preston & de Waal, 2002). Empathy and trust, two essential elements in positive human interaction and interpersonal cooperation, consist of both affective and cognitive components (Brems, 1989; Duan Hill, 1996; McAllister, 1995). They are associated with a release in oxytocin (Barraza & Zak, 2009; Baumgartner, Heinrichs, Vonlanthen, Fischbacher, & Fehr, 2008), a hormone synthesized in the hypothalamus and released to areas associated with emotions and social behaviors.

One particular factor that can stimulate empathic emotions, an important component in the present analysis, is the presence of others who are in need or suffering in some way. Psychologists have noted that emotions can serve as two different types of motivators when others are in need or suffering: individuals can be motivated to reduce their own distress from viewing the distress of others or they can be focused on relieving the stress of others (Batson, 1991; Batson & Oleson, 1991). Empathy and distress appear to work against each other physiologically (Barraza & Zak, 2009) and research indicates that personal distress and prosocial behavior are negatively correlated whereas empathy and prosocial behavior are positively correlated (Batson, 1998; Eisenberg & Fabes, 1998). However, the relationship between

empathy and prosocial behavior has been moderate, indicating that there are several dispositional and situational moderators of the relationship (Eisenberg & Miller, 1987; Eisenberg, 2000). Consistent with this, it has been found that individual responses to others who are in need are also based on the appraisal of the others' relevance to their own salient goals and values, their own self-definition, and the extent to which the others are seen as deserving of assistance base on these beliefs. For example, Goetz, Keltner, and Simon-Thomas (2010) reported that an actor's compassion is aroused by the degree to which his or her own values and beliefs about the constitution of good character, positive meaning, human worth and humanitarian ideals are perceived as consistent with and/or signaled by the sufferer's characteristics, situation, and/or social make-up.

Top-down and Bottom-up Processing

We have based our conception of how mental models for human interactions are developed on brain research into emotions. Brain research indicates that emotions can be generated through either cognitive constructions and interpretation that lead to emotions or through the experience of immediate affect which then can lead to cognitions (Ochsner, et al., 2009). The former type of generation has been called top-down and triggers interactions between the prefrontal cortex areas involving working memory and information retrieval and the left amygdala (Ochsner et al., 2009). [The amygdalae have been found to be involved in responses to emotionally salient stimuli (Ledoux, 2000; Phelps, 2006).] The latter type has been called bottom-up and stimulates both the right and left amygdalae as well as the occipital, prefrontal, and parietal parts of the brain which are implicated in attentional processes and encoding into memory (Ochsner et al., 2009). Thus, top-down and bottom-up processes use distinct cortical networks (Ochsner et al., 2009). However, both types of processing are likely to be active in many situations (Ochsner et al., 2009). Top-down processing is thought to be semantic in nature, involving cognitive complexity that plays a role in emotional regulation whereas bottom-up processing is thought to be important for attention shifting in terms of detection of changes in the environment and potential threats (Ochsner et al., 2009). This is similar to the processes that Kahneman (2011) terms Systems 1 and 2 in the mind. System 1 operates on automaticity without any sense of voluntary control and System 2 involves effortful mental activities.

Bottom-up processing is more sensitive to changes in the environment than top-down processing, and top-down processing helps produce more long-term behavioral repertoires that are effective, but that can also be less sensitive to environmental changes, at least initially. Note for example, that much of human behavior is maintained by if-then rules describing contingencies rather than by the actual contingencies themselves since consequences for behavior are often delayed (see, for example, Malott, Shimamune, & Malott,1992; Weatherly & Malott, 2008). However, the rules individuals follow can lead them to be insensitive to the actual contingencies operating in the organization, producing dysfunctional behavior (e.g., Hayes, Strosahl, & Wilson, 1999). In fact, it has been suggested that top-down and bottom-up processing have implications for how to change dysfunctional behavior, with behaviors being generated by top-down processes being more responsive to cognitive methods that restructure interpretations of the situation and behaviors originating bottom-up being more responsive to behavioral reinforcement methods that reshape responses through desired and aversive stimuli (Ochsner & Gross, 2005; Ochsner et al., 2009; Quirk & Beer, 2006).

Considering that both top-down and bottom-up processing contribute to mental models used in human social interactions can help us reconcile what seem to be opposing theoretical viewpoints of behavior. For example, altruistic behavior has been conceptualized in a variety of ways by researchers. Hirschleifer (1983) takes an economic approach to post-disaster cooperative behaviors and describes a theory of post-disaster altruistic behavior as consistent with enlightened self-interest. This would be consistent with a top-down cognitively generated mental model of appropriate social behavior. However, it has also been suggested that prosocial behaviors may be triggered due to personal distress because people can see themselves as potential sufferers (Eisenberg & Miller, 1987). This conceptual approach appears to describe a bottom-up affectively constructed mental model. More than likely, each theoretical approach accurately, but only partially, accounts for prosocial and altruistic behavior, and there are likely even other explanations of this behavior not yet elucidated that involved complex, reciprocal processing between cognitive and affective brain structures.

Following, we present the three circles found in the integrative framework.

The Integrative Framework

In our view, this framework has the potential for a multitude of applications in various social settings. For purposes of illustration however, we will focus on two management research areas that we believe could particularly benefit from the integrative framework, organizational justice and corporate social responsibility (CSR). Organizational actions in these two realms reflect underlying collective mental models about engagement and responsibility. CSR should concern multiple stakeholder groups beyond the immediate employees, including global organizational and inter-organizational initiatives with groups of people who may not directly interact otherwise, which falls in the circle three of our integrative model. However, organizations that have historically been concerned more with circle one and two themes may find CSR outside of these circles difficult. Similarly, the organizational justice literature usually has been concerned mostly with justice within an organization, falling squarely in circles one and two of our framework. However, there have been calls to extend the concept of organizational justice to stakeholders outside the organization, which the framework could help accomplish.

We conceive of the integrative framework as consisting of concentric circles of successively expanding identities that serve as the basis for mental models for engagement (see Figure 1). These circles are constructed with three dimensions: awareness of time-orientation, scope of impact, and directionality of relationships (see Table 1). We believe that movement between these circles occurs and depends to a large extent on the complex interplay of cognitions and emotions. We will discuss this more with respect to each circle in our framework. We will also speculate on the interactions between the mental models underlying the three circles.
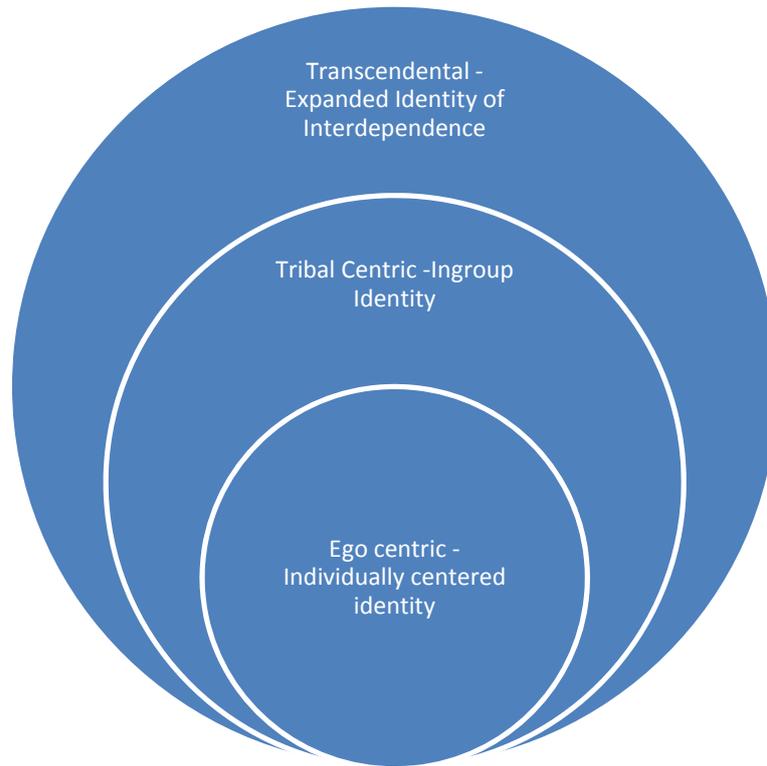
Figure 1: Beyond Social Exchange Theory: Integrative Framework

Table 1: Awareness Dimensions

Circle/Dimension	Time Orientation	Scope of Impact	Directionality of Relationships
First Circle	Short-term	Self/Ego	Simple, One way: Me Vs the world
Second Circle	Short-term and Medium-term	Self and immediate and related others	Restricted two-way: Us Vs the world
Third Circle	Long term	Self, immediate/related others, and distant strangers/universe	Complex, inter-connected: Me in the world

First Circle: "Ego-centric"

Much of research on work behavior has been rooted in models of social psychology, many of which have been based on economic conceptualizations of choice. Economic conceptualizations often assume that individuals are motivated to pursue their own ends in a way that minimizes costs and maximizes profits, which has been called "instrumental rationality" (Weber, 1978). Human interactions are viewed as a set of exchanges with rewards and costs and individuals are thought to decide whom to interact with based on expectations of these rewards and costs (Kahan & Rapoport, 1984).

This circle can be viewed as being parallel to the first of the neo-Kohlbergian major stages of moral reasoning, in which the "personal interests schema" is used (Narvaez, 2005). In this type of thinking, a person uses the filter of how does this affect my personal interest, with no socio-centric perspective involved. Cooperation with others is at the very micro level of thinking, with personal advantage being seen as a virtue (Narvaez, 2005). We can see this emphasis on ego-centric social exchange in models of various work and organizational behavior, such as motivation, organizational justice, power, and psychological contracts. For example, the expectancy (e.g., Porter & Lawler, 1968; Vroom, 1964) and equity (e.g., Garland, 1973; Vecchio, 1981) theories of motivation are directly based on the instrumental rationality model found in economics. Similarly, most conceptualizations of organizational justice (e.g., Fortin & Fellenz, 2008), are based on social exchange concepts derived from economic principles (e.g.Homans, 1974; Thibaut & Kelly, 1959). So are most of the understandings about power (for a discussion see Goltz, 2011). Yet another example is the idea of psychological contracts (Rousseau, 1989), which in turn is viewed as central to the concept of organizational justice Cropanzano & Prehar, 2001).

Certainly, the explanation of human work behavior as primarily being driven by ego concerns appears to be supported by empirical studies. For example, the literature is replete with data indicating that individuals treat the concept of fairness differently depending upon whether it is directed toward others or toward themselves. Individuals overestimate their own performance (Lichtenstein & Fischhoff, 1977; Fischhoff, Slovic, & Lichtenstein, 1977), tend to attribute success to themselves and factors under their control and failures to external factors (e.g., see Mezulis, Abramson, Hyde, & Hankin, 2004 for a review), and tend to put less effort into creating equity after being overcompensated than after being undercompensated (see Campbell & Pritchard, 1976 and Greenberg, 1982 for reviews). Also, studies on power indicate that as power increases, power holders generally view others as little more than tools (Gruenfeld, Inesi, Magee, & Galinsky, 2008) and are not as concerned with how others experience the world (Galinsky, Magee, Inesi, & Gruenfeld, 2006).

On the other hand, it is also well known that studies using purely economic principles to make predictions about social behavior often have fallen short (for reviews, see Goeree & Holt, 2001; Kagel & Roth, 1995). For example, fair offers rather than self-interested ones are common in the ultimatum game (for recent discussions, see Chiang, 2008; Zollman, 2008). Additionally, the tendency of management researchers to take either an economic rationality approach to business or a humanistic one that focuses on emotions has been criticized for ignoring the spiritual aspects of existence (Gozdz, 2000). Similarly, the focus on instrumentality in descriptions of social power has been criticized for ignoring bases of power that stimulate transcendent responses based on the idea of connectedness with others (Goltz, 2011).

Furthermore, ego-centric based behavior can be ultimately self-limiting and it is precisely these atypical responses that may help resolve some of the current issues in organizations in the two management areas to which we apply out model in this paper. For example, in the area of organizational justice, Goltz (2010) found women who believed, despite their failed individual discrimination cases, that in the long run, individual attempts at change are important because many individual attempts will add up, resulting in slow, evolutionary change, and that it is one's responsibility to be part of this process. Similarly, in the area of corporate social responsibility

and sustainability, Baets and Oldenboom (2010) suggest that individuals who act out of a consciousness of connectedness are more likely to be able to build sustainable organizations in part because they are more able to adapt to the complexity that exists in the world than are individuals who think more linearly. This ties back to the dimensions we have listed in Table 1. A mental model based on Circle 1 takes a short-term, narrow approach thus limiting understanding of relationships to a Me Vs Them viewpoint, which misses the complexity of the larger world.

Emotions signal when an important goal is threatened and since individual survival is one of those goals, we can certainly see bottom-up processing as frequently playing an important role in the development and application of an ego-centric mental model. Thus, regardless of which mental model they might normally use, we would expect individuals to operate egocentrically and justifiably so, when feeling fear from threats to individual survival, whether emotional or physical survival is threatened. (Note that this ability to move adaptively from one mental model to another depending on the situation distinguishes our framework from models of moral development in which individuals are thought to shift permanently.) However, individuals may also develop an egocentric mental model via more top-down processes. For example, individuals may reflect on past experience, present circumstances, and future goals and then make a conscious choice of a more egocentric strategy because it is seen as being effective for meeting their goals.

Second Circle: Tribal-Identity- centric

As discussed in the section on social identity, egocentric behavior can be replaced with behavior supporting the values and behaviors of a social group when the antecedents of social identity have occurred. We use the term 'tribal' to signify such forms of social identity. The word 'tribe' is borrowed from anthropology used to describe archaic societies that maintain social order through affective and non-rational bonds (Cova & Cova, 2002). This word still resonates in modern and post-modern societies and is used to signify any group that shares interests, passions, and affective bonds including organizations, industries, professional groups and even cyber tribes (Poster, 1998). Unlike the traditional tribes that were bound by kinship and dialect, post-modern tribes are connected through shared feelings and symbols (Cova & Cova, 2002). Organizational identification one such specific form of social identification (Ashforth & Mael, 1989) and fall in this circle.

Current research on positive emotions (Frederickson, 2001; Kanov, et al., 2002; Lillus, et al, 2008) and prosocial behaviors in the fields of management and organizational behavior (Grant & Francesca, 2010) has given us an insight into a mental model that operates in workplaces which foster a shared identity of compassionate and positive organizations. These studies (Kanov, et al., 2002; Lillius, et al., 2008) reveal the process by which individuals engage in compassionate acts within workplaces and how organizations can foster a compassionate culture that in turn legitimizes individual acts of compassion. These organizations encourage proactive social behaviors through a set of values, practices, and routines (Kanov, et al., 2002). For example, Grant's (2008) study looks at the role of relational job design that encourages and rewards prosocial behavior. This stream of research spans a spectrum from forgiveness (Bright, Fry, & Cooperrider, 2006), compassion (Kanov, et al., 2002; Lillius, et al., 2008), emotional resilience

(Powley, 2009), to virtues (Cameron & Caza, 2002). For an exhaustive review on this stream of research, please refer to Donaldson and Ko (2010).

To some extent, this circle parallels the *maintaining norms schema* found in the neo-Kohlbergian tradition of moral development. In this phase in the neo-Kohlbergian model, individuals have the awareness that people relate to each other through institutions and established practices and upholding social order is therefore viewed as being very important (Narvaez, 2005). For example, religious authoritarianism has been found to be related to this type of reasoning (Narvaez, 2005). However, in our framework, it is not the upholding of the norms and traditions that is so important, but rather the maintenance of connection to tribal identity that is key. It certainly is the case that upholding social norms is a way to maintain one's connection to tribal identity; thus, we see these frameworks as being conceptually parallel. However, we wish to emphasize here that we believe that the motivation to uphold social norms arises from tribal identity rather than the reverse.

In this circle, the sense of tribal identity, i.e. a sense of belongingness to a group, organization, team, family, or a local community, is fostered through regular interaction, which in turn fosters positive sentiment (Homans, 1974). For example, attachments that govern even economic behaviors embedded within networks of social relationships (e.g., Granovetter, 1985; Larson, 1992) are thought to be a critical factor in these interactions (Seabright, Leventhal, & Fishman, 1992). Pressure for continuing these economic interactions often will occur even when the exchanges obtained from the relationships are no longer economically rational (Seabright, et al., 1992). Economic behavior based on emotional attachments rather than rational calculations would be an example of more bottom-up, emotional processing of the tribal mental model rather than top-down cognitive processing.

This form of identity is more inclusive than the egocentric one of the first circle. The tribal-centric mental model has an evolutionary basis in that individuals operating with this model have better survival chances than individuals operating alone. Analyses by anthropological archaeologists indicate that groups tend to develop when habitats become poorer or unstable and competition for resources increases such as due to overpopulation because groups can provide individuals with differential access to resources (e.g., Kennett, Winterholder, Bartruff, & Erlandson, 2009). Also, there is a propensity to be most loyal to one's own kin, known in evolutionary biology as Hamilton's Rule, which specifies the level of altruistic behavior among kin that maximizes the survival of one's genes (e.g., see Bergstrom, 1995). However, because the notion of benevolence is extended only to those who are part of the network, it is still restricted because of the dependency on the dynamic of interpersonal relationships within the context of a group organization. Also, the other side of a tribal-identity centric mental model maybe parochialism and a lack of inclusiveness. It may inadvertently lead to the sometimes toxic dynamic of in-groups and out-groups, such as through discrimination, bullying, shunning, and other behaviors. This may occur at a level that is difficult to detect but in a form that has great impact over time. Certainly, the research on discrimination, for example, indicates that individuals have unconscious biases towards minorities that can result in an accumulation of disadvantages over time (e.g., Agars, 2004; Fiske, 2002).

Further, just as how behaviors based on the ego-centric mental model can be self-limiting, in this case, a focus on the tribe can lead to a sort of prisoners' dilemma effect in that resources gained for the tribe at the expense of outsiders can ultimately have negative effects on all, both tribe members and non-members. This is illustrated by research that indicates that countries with social heterogeneity and large inequities, such as in the form of income inequality and economic discrimination among groups, have lower trust levels between economic agents and lower economic growth, creating a poverty trap (Zak & Knack, 2001). Therefore, while a tribal-centric view may be meaningful and productive in the short and medium term, its narrow awareness of scope of impact and related limited relational directionality which gets manifested as 'Us Vs Them' mentality is likely to be problematic in the long term, especially in complex situations and problems.

Although, as discussed, much of tribal behavior may result from emotional attachments or be genetically programmed as a result of evolution, when there is more of a choice, a cognitive, top-down processing could certainly lead to a mental model that belonging to a tribe may be more effective for survival than not belonging.

Third Circle: Interdependence-centric

Much of existing research on prosocial behavior that goes beyond the social exchange theory driven models is done on the second circle by the positive organizational researchers. However, much of this research is based on the assumptions of immediacy, proximity, interaction and a relational or caring ethic. In the third and final circle, we describe a transcendent mental model that is predicated upon the most expansive understanding of interconnectedness of all sentient beings in the web of life. In this circle, people have moved from situationally motivated prosocial or moral behavior to more enduring concern about others' welfare (Batson, et al. 1995) leading to a sense of oneness and a merging of self-other boundaries (Cialdini, et al. 1997). For such helping behavior based on a transcendent mental model, one needs to be objectively self-aware (Carson & Miller, 1987), possess emotionality (i.e. the tendency to experience emotions), and have a highly developed set of emotional regulatory processes (Eisenberg, 2000). This is in line with Oschner, et al.'s (2005) conclusion that cognitive capacities and emotional capacities go together.

We find two extremely different and seemingly opposed frameworks as helpful anchors for this circle: one based on an abstract and rational idea of humanity grounded in the enlightenment tradition of entitlement and rights, and the other grounded in spiritual and religious traditions of moral responsibility towards fellow creatures.

According to the first framework, this mental model is based a moral sensibility or concern for remote strangers from different continents, cultures, and societies (Hoijer, 2004) based on an abstract and rational idea of humanity (Sznaider, 1998) arising from democratization. It is a rights-based approach related to personal responsibility. Therefore, this model tends to distinguish between those who may be called 'deserving' and 'undeserving' of compassion. This is echoed in Skitka's (1999) finding that both liberals and conservatives were generally equally likely to ascribe more personal responsibility and blame to both communities and individuals that did not take adequate flood precautions than those that did while seeking federal disaster

assistance. Lerner and Simmons (1966) present evidence for the argument that whether observer reactions to the innocent victim take the form of compassion or rejection depend on the observer's need to believe in a just world and the belief that there is an appropriate fit between effort and outcome.

The second approach to such benevolence is grounded in spiritual and religious traditions. Haidt and Graham (2006) argue that community, authority, and the sacred are the sources of moral values across people and cultures. Both Eastern and Judeo Christian traditions have emphasized the role of compassion in salvation or wisdom. Sznaider (1998) describes the Christian principle of 'love thy neighbor' as a manifestation of God's *agape,* a spontaneous, unconditional and unmotivated by the value of the one who is loved. Similarly, according to Buddhism, compassion exists when one has the wisdom to see all sentient beings are very much interdependent, and therefore, the question of worthiness is not part of the picture in this approach. Compassion in this tradition flowers out of the assumption that we are all connected in the tapestry of life by our own human spirituality and connectedness to the planet as a whole (Long, 1997). It is a set of deeply held values and beliefs that guide a particular community or society in their relationship with nature as a whole, which includes other human beings (Poonamallee, 2011a). In this model, compassion and wisdom go together because one operates from an understanding that all sentient beings are interconnected and operate as one and focuses on the ideal of unity.

Both the enlightenment and spiritual traditions that can serve to anchor behavior in this third circle would require a person to use a *postconventional schema*, in the words of the neo-Kohlbergian tradition of moral development (Narvaez, 2005). In this type of reasoning, social conventions are not inviolate; instead, principles and values are key. Moral obligations are based on sharable ideals rather than ethnocentric preference (Narvaez, 2005). This approach requires more cognitively complex thinking, which provides more flexibility. This flexibility in thinking comes from a greater exposure to various situations: research indicates that the more education and the richer one's social experience, including multi-cultural experience, the greater the development of postconventional thought (Narvaez, 2005). For example, in Kohlberg's (1969, 1971) postconventional phase, individuals recognize that compromises are sometimes needed because notions of what is just can differ since the distribution of resources and rewards can be based on a number of criteria, such as self-interest, physical characteristics, need, relationship ties, and behavior or productivity (e.g., Thomson & Jones, 2005). Therefore, post-conventional thinking is based on open scrutiny and debate (Narvaez, 2005).

This paper does not argue for either the humanistic or spiritual approach. But drawing on both frameworks, we argue that collectively held beliefs and values of any social group– be they grounded in traditions of spirituality or in enlightenment – have an impact on creating and sustaining a transcendent mental model for human interaction. In fact, there is sufficient evidence both faith and spirituality based groups and non-spiritually or religiously inclined radical rational humanist societies operate based on this transcendent mental model. Scandinavian and western European countries, among the least religious wealthy countries, are also most likely to contribute very generously to foreign nations. For example, the Norwegian government has the distinction of the highest per capita contribution to foreign aid (104 cents per

person) but is also among the least religious wealthy nations.[2] Similarly, Sweden and Denmark also rank among high contributors of foreign aid while falling among the least religious nations.[3] Citizens of these countries also contribute towards providing a high quality of life for their own citizenry in terms of universal healthcare, education, environmentally friendly transportation etc. Common to both traditions is the transcendent mental model that suspends social exchange theory on a long-term basis.

Movement between the Circles

One of the primary ways in which our framework is different from Kohlberg's discussion of moral development (1969, 1971) is that in our view, movement between mental models is neither unidirectional nor does it arise solely from moral development. It is possible to move between circles triggered by either top-down/cognitive processes and/or bottom-up affective processes. To illustrate the various possibilities in terms of movement between the three circles, we constructed Table 2, which includes examples of movement that could be driven by top-down or bottom-up processing.

Table 2: Examples of Transition Types from Circle to Circle

Direction of Movement	Top-down Processing	Bottom-Up Processing
Outward	Organizational socialization into a compassionate culture (Circle 1 to 2) Regular meditation practice (Circle 2 to 3)	Pro-social behavior in terms of empathetic response to co-workers (Circle 1 to 2) Pro-social behavior in terms of empathetic response to strangers in crisis (Circle 2 to 3)
Inward	Protective response to ongoing survival pressures, e.g., immigration, competition (Circle 3 to 2 or 2 to 1)	Experience of sudden serious threats to own basic needs (Circle 3 or 2 to 1)

We have termed movement from a less inclusive to more inclusive circle 'outward movement' and the movement from an outer to an inner circle, 'inward movement'. Generally speaking, we view outward movement, in which the focus is beyond the ego concerns or even the tribe, to signal growth in an individual's, group's, or organization's mental model development. This is because the more expansive mental models represent more cognitively complex thinking, such as by taking into account how beings are interconnected and how they impact each other in complex ways. Thus, egoistic and tribal concerns are allowed for in the third circle, but they are put in their proper places. However, it should be noted that moving to a more self-focused mental model that excludes more expansive thinking may sometimes be called for in the situation and it is not necessarily the case that a narrowing focus represents regression.

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[2] http://www.infoplease.com/ipa/A0930884.html
[3] http://www.gallup.com/poll/142727/religiosity-highest-world-poorest-nations.aspx

There are instances when an egoistic focus is needed for self-protection or growth, for example, that then can allow for a later more permanent movement to a more expansive mental model.

Recall that research indicates that mental models are fairly resistant to change (e.g., Swann & Read, 1981), change primarily when individuals are motivated to more deeply process information that is discrepant with their models (e.g., Rousseau, 2001), and even then, usually change slowly (e.g., Welch Larson, 1994). Therefore, for movement to occur between circles and for mental models to change more permanently, we believe that some time must elapse during which cognitive restructuring is occurring in response to changing conditions. This could be exposure to different cultures, for example, as suggested by the research that indicates more cultural exposure is associated with more post-conventional thinking (Endicott, Bock, & Narvaez, 2003). However, it is also possible that bottom-up emotional processing will trigger movement between circles to broader inclusivity. In these cases, we expect the movement to be more immediate and short-term in nature and movement back to earlier, less inclusive, mental models will be likely at some point unless sufficient top-down processing occurs as well. For example, movement between the second and third circles may occur in response to the suffering of strangers during a disaster. But this can be transient if the response was driven solely bottom up or affectively driven without an accompanying top down cognitive reconstruction. This is equally applicable to any change in external stimuli. If organizations want to move beyond ego and social identity centric behavior, such as when trying to generate inclusiveness in the organization, they can use more affect-generating practices (e.g., how would you feel in this situation of discrimination), but these might be short-term in effectiveness. Cognitive practices that focus on oneness and interdependence might be more long-term. For example, the effect of an emotionally charged training program to change attitudes and behaviors may dissipate over time without sufficient cognitive restructuring to make it longer lasting.

Outward Movement

Outward movement is possible based on positive cognitive framing or emotional arousal. Top-down processing that leads to outward movement is more likely to take place over a longer period of time than bottom-up process that leads to outward movement and the effects are likely to be more permanent in nature. An example of movement from Circle 1 to 2 is the socialization of new members into organizational culture. A newcomer enters an organization on the basis of an individual employment and psychological contract with the employer, i.e. Circle 1 and moves towards Circe 2 through socialization. Organizations achieve this through a top-down mechanisms of clarification of roles and relationships (e.g., see Bauer, Bodner, Erdogan, Truxillo, & Tucker, 2007). This adoption by the newcomer of the mental model used by the organization may represent a movement from a more ego-centric mental model to a tribal one (first circle to second circle) and engender organizational citizenship behaviors thus moving the employee from an ego-driven individualistic identity to one of organizational identification.

An example of a top-down cognitive restructuring mechanism moving from Circle 2 to Circle 3 is regular meditation practice. The research literature on meditation suggests it stimulates movement from a circle two mental model to a circle three mental model, since its effects include non-judgmental acceptance, compassion, and an increased sense of connectedness with others (for a review, see Goltz, 2011). Meditative practices increase calmness and wellbeing

(Friedman & Coates, 2000) and result in an ability to respond non-habitually (Wenk-Sormaz, 2005). In addition, the wisdom and spiritual-based reasoning that can arise from practices such as meditation emphasizes more collective and universal concerns, transcending concerns about self (e.g., Achenbach & Orwoll, 1991; Dehler & Welsh, 1994; Orwoll & Perlmutter, 1990; Pascual-Leone, 1990).

Outward movement can occur from bottom-up, affective processing as well. Disaster research as well as research on compassion towards strangers indicates that social exchange norms are suspended or relaxed during breaching moments such as large-scale natural disasters, and compassion and empathy is directed towards those with whom one does not share organizational or social identification and who might not be able to reciprocate the help (e.g., Comfort, 2006; Haidt & Graham, 2006; Hoijer, 2004; Nussbaum, 2001; Poonamallee 2012; Viscusi & Zekhauser, 2006; Weine, et al, 2002). For example, altruistic and prosocial behaviors in disaster contexts take the form of volunteerism (Taylor, 1970), donations (Argothy, 2003), provision of emergency medical services to the victims (Quarantelli, 1983), search and rescue (Durkin, 1987), and sharing of knowledge and expertise to develop community psychosocial and civic infrastructure (Weine, et al. 2002). Prosocial behaviors are thought to be triggered due to personal distress (Eisenberg & Miller, 1987) since people can see themselves as potential sufferers at some point, which can lead to an emotional arousal that moves them beyond both the first and second circles to the third one. However, this expansion of identity may not be sustained over periods of calm unless there is a cognitive reframing of some sort. The good news is that this behavior can be generated through top-down processes as well. For example, Douty's (1972) economic approach to post-disaster cooperative behaviors as consistent with enlightened self-interest is more cognitively based. So is Dynes' (1994) description of situational altruism, which emerges when the new victims' needs cannot be met by existing institutional resources. Prosocial behavior based on a more permanent third circle mental model is needed in an era of ecological overshoot that will depend on compassion and kindness, not only during disasters but continually (Cairns, Jr., 2005).

Inward Movement

As we have indicated, we expect that   inward movement generally does not represent growth in cognitively complex thinking and so, outward movement is more desirable than inward movement. However, inward movement is expected to occur at times and these occurrences are likely to fall into one of two categories. First, as discussed, an increased focus on self or tribe to the exclusion of others outside those circles is likely to happen when the more inclusive mental model was achieved through bottom-up, rather than top-down processing. For example, after the worst of the disaster appears to be over, the mental model of helping strangers, even natural enemies that was stimulated through emotional arousal recedes into the background, and the tribal-centric model re-emerges.

Second, we expect that inward movement will commonly happen when the self or tribe is threatened in some ways in terms of the ability to meet basic needs. This threat could be processed either cognitively or emotionally. A sudden threat is likely to be processed affectively bottom-up and longer term, a slowly emerging threat is likely to be processed top-down. If the threat is sudden and emotionally processed, it is possible that upward movement to the previous

mental model will occur once the threat has been handled. If the threat has been more long term in nature, stimulating cognitive processing, then a return to the earlier, more inclusive mental model is unlikely unless additional cognitive restructuring occurs that stimulates that movement.

Implications for Theory and Practice

We believe this model is broadly applicable and can help significantly expand the focus of research on social interactions inside and outside organizations. For purposes of illustration and brevity, however, we focused two research areas that we believe could particularly benefit from the integrative framework: organizational justice and corporate social responsibility (CSR). We summarize them here and also discuss some aspects of our framework that could use additional development in future work.

Most explanations for the concept of organizational justice (e.g. Fortin & Feelenz, 2008) are based on instrumentality and equity (Kahan & Rapoport, 1984; Sunahara & Pierce, 1982). However, these two explanations are often at odds because sometimes equity seems to rule and sometimes instrumentality does (for reviews, see Goeree & Holt, 2001; Kagel & Rogh, 1995). Recall, for example, that fair offers rather than self-interested ones are common in the ultimatum game (Chiang, 2008; Zoolman, 2008). Our model could help account for these disparate findings. Equity and instrumentality may arise from two very different mental models: expectations of parity might be seen more in the tribal-centric circle and less so in the egocentric one, in which individual instrumentality would rule. However, our integrative framework also suggests that organizational justice research should be expanded beyond a reliance on economic and equity models of behavior because these models tend to neglect studying justice beyond immediate networks of dyadic social relationships and don't do well at examining justice across the tribe as well as with those outside the tribe.

Research in this area should begin to use broader models of justice that can more easily be applied beyond the dyadic social exchange, such as the fairness model based on the concept of groups as patches (Goltz, 2013), which recognizes that multiple levels are operating in terms of the exchange of resources and that groups simultaneously manage these multiple levels so that over the long term, equity is achieved across individuals. Still, the Goltz (2013) model seems more relevant to the second circle in our integrative framework and would need to be expanded to include a larger web of humanity and life to be truly what we mean by interdependence-centric.

Similarly, we believe that our integrative framework can help in moving CSR initiatives from the second tribal-centered circle to the third, i.e. the interdependence centric circle, which is a way to build an interconnected world. CSR as a research area has gone through multiple iterations (Frederick, 1987; Poonamallee, 2012; Waddock, 2004), starting from philanthropy and charity programs (CSR1), business benefits and bottom line impacts (CSR 2), legitimacy driven business ethics and voluntary compliance (CSR 3) and finally cosmos-centric corporations (CSR4). Although the cosmos-centric approach to CSR is a very appealing proposition, it is a normative model that is difficult to translate to practice. Part of the challenge is that unlike individuals, organizations cannot be considered to be moral actors (French, 1979; Goodpaster & Matthews, 1982; Ranken, 1987; Velasquez, 2003). Therefore, moral action must begin and end

with individuals. However, a cosmos-centric approach to CSR relies on other-oriented behaviors that are extended to external stakeholders including the larger community (Poonamallee & Joy, 2012). This is even more expansive than organizational citizenship behaviors and/or prosocial behaviors that are mostly looked at within an organization, i.e. the tribal centric engagement (circle two) in this model. Instead, it is more akin to circle three in our framework. For this transition from circle two to circle three to occur, there needs to be a shift in the shared mental models among the individuals. These organizations must develop a more expansive shared social identity that will encourage atypical behaviors that not solely governed by social exchange norms. The dominant conception of mental models guiding individual behaviors are based on an agency theory perspective (Battilana, 2006; Embiryaer & Mische, 1988; Garud & Kanoe, 2001), which in turn is based on motives of self-interest (Anderson & Hill, 2002; Coase, 1974; Hendry, 2005).

This paper contributes to this discourse by outlining mental models that are more inclusive than the traditional agency theory and social exchange theory perspectives. This paper describes how these mental models may be constructed through the use of top-down and bottom-up mechanisms. This transition may be effected through the use of the mechanisms of framing and affective arousal. The cognitive/top-down process is necessary to create a mental model of an interdependent social identity. This type of expansive identity then encourages and even inspires individuals to engage in circle three type of activities. At this point, the top-down and bottom-up processing research is located in individual responses to external stimuli. Further research can explore this relationship at meso and macro levels. This approach is particularly suited to a mixed method approach combining qualitative, especially interpretive and action research approaches, along with traditional quantitative approaches.

Therefore, we believe that a framework that contains successively more expansive mental models could result in a better understanding of currently researched topics as well as stimulate new research streams. But we caution that our framework is a preliminary one meant to stimulate thought and therefore needs to be further developed.

One area that needs more examination is how this framework may differ depending on culture. Cross-cultural research posits collectivism and individualism as dimensions of national culture (Hofstede, 1980) which suggests that some countries and cultures may be prone to operating in the tribal circle than others who may be more prone to operating in the egocentric first circle. Therefore it is important to examine the role of national cultures in mental models to clearly identify the constraints of our proposed framework. It is also important to understand the effect of more local cultures. As an example, Orozco and Poonamallee (2013) discuss how the knowledge of indigenous populations, which is often based on ecological embeddedness—one's relationship with the environment, does not fit with the mental model of intellectual capital and intellectual property rights, which views knowledge as being "owned" and removes it from a sense of place. This difference in mental models creates a number of issues, such as the appropriation of indigenous knowledge. This example also illustrates that an emphasis on social exchanges as primarily based on ego-centric thinking becomes problematic as more and more business occurs across cultures which draw on different frameworks. Considering more expansive mental models than the egocentric would help in solving these cross-cultural dilemmas.

Another area in which more development is needed is in the specification of movement between circles. In our paper, we have offered some ideas of how this might occur, based on brain research. However, the framework could use more clarity on how earlier mental models (e.g., egocentric) are used, even during emotional stress, after higher mental models interdependence centric) have been developed and routinely applied. Although we believe that individuals are adaptive and tend to use the mental model that best fits the situation once they have sufficiently developed the ability to use each mental model, it is also possible that these mental models not only follow a developmental progression, such as in the neo-Kohlbergian framework (Narvaez, 2005), but also that people who use more expansive mental models tend to disparage narrower ones, as has been found in research on moral development (e.g., Rest, 1973). Concepts from the hierarchical need theories of Maslow (1954) and Alderfer (1969) might be helpful for this analysis as well. Maslow (1954), for example, discussed the concept of the prepotency process, which indicates that lower order needs must be satisfied before upward progression occurs, which suggests that use of a more expansive mental model by an organization might not be possible if a tribal identity has not been well developed. Alderfer (1969) thought that different need states operated simultaneously and that individuals could operate at higher level needs without fulfillment of lower level ones, but he also indicated that individuals might, when frustrated by their attempt to meet higher level needs, put more emphasis on lower order ones. Certainly, Alderfer's frustration principle would be consistent with our belief that emotional triggers such as stress might sometimes stimulate the use of a more egocentric mental model. As can be seen, there is yet much to consider and explore in terms of the progression and the application of the mental models.

An additional limitation that we wish to acknowledge is that we have chosen to focus on three major types of mental models, but we also understand that one could readily identify subcircles within each of the three circles. For instance, in the second circle, family members no doubt generate a somewhat different mental model than friends, which are probably associated with a somewhat different mental model than tribal members that are acquaintances. Similarly, in the third circle, minerals, plants, animals, and humans are likely associated with different mental models for most people; for example, some of these generating a sense of connectedness more readily than others. Furthermore, we have chosen to stop at the socio-ecological in our framework, but it could be argued that mental models could be extended out further to include elements that exist beyond what we can perceive as being part of our environment. Therefore, future work in this area could both work on the more subtle layers of mental models as well as more extended ones.

Conclusion

In this paper, we have described an integrative model of engagement and the underlying mental models that govern various modes of engagement. The framework serves to extend our understanding of engagement in that it considers atypical behaviors that are not ego-centric and driven solely by social exchange norms. Specifically, it brings together research on tribal-centric prosocial behaviors, suffering-centric engagement focused on unknown others, and an interdependence-centric engagement based on traditions of spirituality and religion, and democracy, and enlightenment. This paper also draws on recent brain research on top-down and

bottom-mechanisms to explain the creation of mental models thereby extending the understanding of mental models to include both affective and cognitive mechanisms.

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