

RUNNING HEAD: COMMUNICATE BOND BELONG

Proposing the Communicate Bond Belong Theory:
Evolutionary Intersections with Episodic Interpersonal Communication

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Abstract

The Communicate Bond Belong (CBB) Theory is an evolutionary and motivational explanation of human communication's role in the relational functions of social interaction. CBB Theory conceives of all social interactions as energy expending, but posits that only some social interactions are striving behaviors (i.e., actions taken to satiate a need). CBB Theory proposes that social interaction operates within a homeostatic system, developed from internal pressures to satiate a need to belong, shaped by competing desires to invest and conserve social energy, and adaptable to new social circumstances and technological affordances. The theory bridges gaps among evolutionary and social psychology theories and interpersonal communication theories by attending to the multifunctional nature of everyday talk in relation to fundamental human needs.

Keywords: everyday talk, evolutionary theory, human energy management, interpersonal communication, social interaction

Proposing the Communicate Bond Belong Theory:

Evolutionary Intersections With Episodic Interpersonal Communication

True to the words of Aristotle, humans are social animals. They are often in the company of other humans at work and home. When the day's labor is done, humans seek the company of others in repose, sport, and leisure. Bonding with others is a fundamental human activity, necessary for nearly all of the essential tasks of life: survival and reproduction, attachment and affection, work and play, as well as teaching and learning. Both possessing a larger social network and socially engaging with members of that network uniquely predict overall health and subjective well-being (Helliwell & Wang, 2011; Ren, 1997; van der Horst & Coffe, 2012). A lack of human contact is associated with a higher risk of death (Hunt-Lunstad, Smith, & Layton, 2010). Although the importance of social interaction to human health and survival is well established, the nature and content of social interactions in relation to its benefits requires further examination. Under what circumstances do individuals seek out social interactions? What types of social interactions benefit individuals and strengthen relationships? Under what conditions do individuals engage in personally and relationally beneficial social interactions? Why do individuals fail to engage in social interactions that offer the greatest benefits?

The purpose of the present monograph is to formally present a new theory of human communication: the Communicate Bond Belong (CBB) Theory. Evolutionary perspectives on human sociability have argued that social interaction with close relational partners serves the fundamental need to be included within communities, and that personal relationships are necessary for fulfilling the human need to belong and affiliate (Baumeister & Leary, 1995, Cacioppo & Hawkey, 2008; Leary, Kelly, Cottrell, & Schreindorfer, 2013). Research in support of the need to belong has examined the cognitive and emotional reactions to social exclusion, but

generally has not focused on the nature and type of social interactions in relation to the need (Gere & MacDonald, 2010). Through the lens of evolutionary theory and need-motivation perspectives (e.g., Hull, 1930/1970), CBB Theory explores the implications of evolutionary-based conceptions of the purpose and value of human relationships in relation to the benefits and costs of everyday talk. In doing so, the theory bridges gaps between evolutionary and social psychology theories of social interaction and research on the form and function of everyday talk in communication research.

To accomplish the distal or end goal of forming lasting relationships, CBB Theory proposes that individuals are motivated to engage in communicative behaviors that form and strengthen relationships. Yet, social interaction takes a variety of forms and not all are equally capable of satiating the need to belong or strengthening relationships. CBB Theory further contends that all social interaction expends social energy. Given human limits on social energy and the quantity of relationships a person can possess, time and energy spent developing and maintaining any given relationship are opportunity costs for engaging in other ways with alternative relational partners. Furthermore, all forms of everyday talk deplete reserves of social energy and all relationships imply a reciprocal obligation, but not all forms of talk are equally beneficial personal or relational investments. To explain why individuals choose to engage in certain types of interactions over others, CBB Theory presents a homeostatic model of social interaction, wherein the motivation to socially engage is offset by a motivation to conserve energy. These often-competing forces shape the amount and type of social interaction. CBB Theory expands the reach of interpersonal communication by conceiving of social interaction as operating within a homeostatic system created by individuals to satiate a need to belong, shaped by competing desires to invest and conserve social energy, and adaptable to new social

circumstances and technological affordances.

The Theorizing Process

Acknowledging the challenges of utilizing the covering law model in social science, CBB Theory advances its theoretical commitments in a manner consistent with this approach. The covering law approach has several advantages, including greater transparency. By requiring theorists to formally state their commitments, it situates new theory in contrast to other theories and constructs, it delineates the theory's central nominal and empirical constructs, and it identifies the boundaries of the theory (Berger, 1977; Stacks, Hickson, & Hill, 1991). All theoretical constructs exist within encompassing parameters of abstraction, with *laws* and *principles* existing at the highest levels of abstraction, constraining axioms, which, in turn, constrain *theorems*, which, in turn, constrain *propositions*. Acknowledging the existence of exceptions to the rule, theoretical *principles* generalize the nature of a construct or the relationship between two or more constructs, and represent “a general or basic truth on which other truths or theories can be based” (*Merriam-Webster New World College Dictionary*, 2014).

At the next level of abstraction in the covering law approach is the axiom. An *axiom* is a widely shared belief or a statement taken without evidence, rather than an established relationship among variables (Arnold & Bowers, 1984). Although principles and axioms both contain nominal concepts (abstract or speculative concepts that may not be empirically observable), principles are more sweeping claims and axioms are more limited in scope. Axioms also reflect the deductive nature of the theory. They are logically derived from or can further constrain the theory beyond the parameters set by its principles, providing greater illumination of a principle's aspects and boundaries. In essence, axioms specify and direct application of the theory's principles.

Theorems emerge from logical arguments drawn from principles and axioms; they are deductive by nature. Often a set of theorems, each with a specific, limited scope, is derived from axioms in theory building. *Propositions* are smaller in scope than theorems, further constraining the theory in specific ways (Stacks et al., 1991). Thus, *propositions* exist at the most concrete level, providing elements that are most easily converted to hypotheses for empirical testing.

CBB Theory attempts to move knowledge about social interaction forward by integrating theoretical structures from existing work in human relationships and interpersonal communication in the hopes of germinating new research and lines of inquiry by juxtaposing pertinent and interrelated theoretical elements in unique and productive ways. It is advantageous for new theories to incorporate tenets and concepts from existing theories because it advances and integrates constructs in new and developmental ways (Miller, 1987). In serving this function, CBB Theory posits five principles, five axioms, four theorems, and five propositions offering explanatory mechanisms as to which specific communicative behaviors benefit humans individually and relationally, and how/why they do so (*Figure 1*).

Evolutionary Theory and Human Relationships

CBB Theory supports the contention that interpersonal communication is part of a broader biological process shaped by evolutionary forces (Floyd & Afifi, 2011). Natural selection favors mechanisms optimally allocating limited resources among the reproductive goals of survival, mating, and parenting (Darwin, 1859). Ancestral humans evolved and adapted in the environment of evolutionary adaptedness (EEA). The EEA is “not a place or time,” but a composite of the social and environmental selection pressures that had a systematic impact on the development of modern humans’ physical and psychological makeup (Tooby & Cosmides, 2008, p. 120). Inasmuch as the possession of a certain trait increased opportunities for survival,

reproduction, and parenting during the EEA, it can be conceived of as part of an evolved system. Although the particular evolutionary mechanism(s) (e.g., direct fitness, inclusive fitness) enabling the formation of long-term bonds, particularly with nonkin, is a matter of much debate (see Seyfarth & Cheney, 2012; Terrell, 2015; Tooby & Cosmides, 2008), there is strong evidence that establishing and maintaining relationships offers an array of survival and reproductive benefits, including sharing, cooperation, protection, and reproductive opportunity (Bowels, 2009; Seyfarth & Cheney, 2012). Due to a high degree of tribal interdependence and the increased likelihood of death following social isolation during the EEA, the investment of resources in others may have been essential for survival (Baumeister & Leary, 1995; Brown & Brown, 2006).

The necessity of interdependence and inclusion for survival may have given rise to long-term bonds or relationships (i.e., the *trait* of friendship) (Terrell, 2015). A relationship is “a tie between two or more individuals that is stable over time and across contexts” (Brown & Brown, 2006, p. 4). Relationships also require mutual and specific acknowledgement, or individuation from a group beyond sociological categorical distinctions (Miller & Steinberg, 1975), and some degree of mutual influence (Reis, 2001). These three defining characteristics of a relationship (i.e., stability, individuation, interdependence) allow humans to effectively and efficiently regulate social, emotional, and material investments in another person in relation to future returns on that investment. The mutual recognition of a relationship streamlines decisions regarding investments in and concern for others, especially among nonkin (Brown & Brown, 2006; Seyfarth & Cheney, 2012). Relational partners are selected based upon the potential for emotional and social bonding (Ainsworth, 1989) and other valued and observable characteristics (Hall, 2011; Tooby & Cosmides, 1996). Individuation, interdependence, and stability ensure a relationship’s mutuality and endurance, and the characteristics for which the relationship was

selected guide the relational development and investment. Therefore, relationships are the primary, if not the sole, mediator between relational partners' characteristics and their effects on the actor and recipient(s) (Brown & Brown, 2006). If a relationship does serve as a mediator, then heritable traits benefitting an individual through the formation and maintenance of social bonds would have been selected for, while traits maladaptive for the individual's bonding and inclusion would have been selected against during the EEA (Baumeister & Leary, 1995; Brown & Brown, 2006).

Motivational mechanisms, behavioral tendencies, and emotions supporting the formation and maintenance of relationships would have accompanied the evolution of relationships, or friendships (Tooby & Cosmides, 2008). However, adapted mechanisms preventing free-loaders/riders and cheating were also needed to prevent widespread exploitation of tendencies toward cooperation, inclusion, and resource sharing (Tooby & Cosmides, 1996). A tendency toward reciprocity is one mechanism by which resources invested in others are made available to the investor when needed, while keeping unequal treatment in check. Reciprocity is the mutual, yet not necessarily equivalent, exchange of emotional, social, informational, and/or material resources over time, and it is generally a necessary component of enduring human relationships (Gouldner, 1960). Without reciprocity, the very basis of relationships would be undercut; resources invested in another person would be lost and unrecoverable (Tooby & Cosmides, 1996). Non-reciprocating relationships tend to terminate. This prevents non-reciprocating others from engaging in persistent unequal exchange. Furthermore, reciprocal obligation motivates humans to be invested in relational partners' survival, even if only to preserve the relationship for future selfish gain (Tooby & Cosmides, 1996; 2008). This suggests behaviors engendering social connection and the formation of relationships increase the likelihood of survival, not only

for the individual, but for both relational partners. A relationship between two individuals increases the fitness of both partners because it implies some level of future reciprocity of resources or aid (Seyfarth & Cheney, 2012). Therefore, the survival of relationship partners is beneficial for the individual, particularly for resources intrinsically dyadic in nature, such as information sharing, coalition formation, mutual protection (e.g., physical, reputational), and procreation (Brown & Brown, 2006; Dunbar, 1996).

Although the principal of reciprocity is a key component of social exchange (Gouldner, 1960), as relationships become more bonded, the nature of the exchange changes. A *communal* relationship, in comparison to an *exchange* relationship, is marked by attentiveness to another's needs, even when there is no opportunity for immediate reciprocity or reciprocity in kind (Clark, Mills, & Powell, 1986). A communal orientation toward a relationship partner overrides tendencies toward pure self-interest (Brown & Brown, 2006) and tit-for-tat exchange (Clark et al., 1986). The strength of the communal tie varies directly with the interdependence and emotional closeness with the relational partner; closer relationships accompany greater obligations and attentiveness toward the other's needs (Clark, Fitness, & Brissette, 2001). CBB Theory envisions concentric circles of relational types obliging and benefiting the individual. At the center of the circle are strong communal relationships that are emotionally closest to the individual. These relationships entail both the greatest obligation cost and the highest likelihood of future return on investment. Ties with others become weaker, or less emotionally close, at circles more distant from the center, with weak ties or acquaintances residing at the outermost circle. Each new relationship taxes the individual because it implies reciprocity and, at minimum, a weak communal orientation, which constrains selfish actions and requires repayment, particularly in times of need (Tooby & Cosmides, 1996). Relationships with weak ties (e.g., an

acquaintance) have fewer obligations than for close friends or romantic partners near the center of the circle and they also much less likely to be communal in expectations of reciprocity.

Principle 1: A human relationship is an adaptive mechanism, enabling the recognition of a uniquely valuable other and streamlining decisions about the type and amount of investment of resources to be made in and to be expected from another.

Principle 2: Reciprocity is the social process of establishing a general balance of energy investment across human relationships.

Axiom 2: Whether communal or exchange in nature, relationships are always established through reciprocity.

Theorem 2: The most sustainable relationships are those established and maintained through a general equilibrium of reciprocity as perceived by the relational partners.

Human Needs and Striving Behaviors

Human motivations are forces within the individual directing mental resources and behaviors toward the elimination of unsatisfying need states (Tinbergen, 1951/1970). Needs arose to respond to adaptive pressures: “When a condition arises for which action on the part of the organism is a prerequisite to optimum probability of survival of either the individual or the species, a state of need is said to exist” (Hull, 1943/1970, p. 520). Theories of human needs are consistent with evolutionary principles; needs ultimately serve the continuation of the species by allowing the individual to survive, flourish, and procreate (Hull, 1943/1970). If underlying human need states emerged from evolutionary forces, some need states were adapted as a consequence of an adaptive system of relationship formation and reciprocal obligation. Three such systems have been proffered. Humans are particularly attuned to detecting cheaters or those

who take an unfair share of resources (Tooby & Cosmides, 1996). Loneliness has been theorized to be an adaptive state, motivating individuals to react prosocially to isolation (Cacioppo & Hawkley, 2008). Humans are instinctually motivated to monitoring others' regard to ensure that social exclusion is not nascent or forthcoming (Leary & Kelly, 2008). Cheating detection, loneliness, and detection of ostracism are examples of human motivations and abilities attuned to inherently social challenges.

Motivational theory distinguishes between *need satiation* and *striving behaviors*, which are the actual behaviors enacted to satiate the given need. When a need precedes and accompanies an organism's behavior, it is said to motivate or drive the behavior (Hull, 1943/1970). That is, needs are more fundamental than the behaviors employed to resolve them (Tinbergen, 1951/1970). A need can be met or satiated through a variety of different behaviors, especially across contexts and cultures. There are many ways to satiate a single need. For example, the need to procreate is not satisfied by intrasexual competition or other courtship behaviors. Nonetheless, the need to procreate drives courtship strategies and behaviors. This conceptualization distinguishes striving behaviors, which are exploratory, variable, plastic, and somewhat unpredictable (e.g., dressing up, maligning a competitor, flashing a coy smile), and consummation, which are actions that directly satiate the need itself (i.e., procreative activity) (Tinbergen, 1951/1970). One of the contributions of CBB Theory is recognizing the distinction between social behaviors undertaken in order to satiate needs, which are striving behaviors, and need consummation itself in the context of social interaction and human relationships.

The Need to Belong and Striving Behaviors

The central need state of CBB Theory is the need to belong (Baumeister & Leary, 1995). Early research on social needs identified the need to affiliate, which includes the need to form

relationships and to “co-operate and converse sociably with others” (Murray, 1938/1970, p. 369). Theoretical development of the affiliation motivation increasingly focused on social interaction (Hill, 1987). Hill (2008) defines the need to affiliate as “the desire to associate with and interact with other people, particularly in warm, harmonious ways” (p. 410). Both Murray (1938/1970) and Hill (1987, 2008) suggest the act of social interaction is synonymous with the need itself. However, it is critical to delineate the fundamental need from the behaviors associated with satiating that need (Tinbergen, 1951/1970). The need to affiliate confounds the acts fulfilling the need (i.e., to socially interact) with the need itself (i.e., to form and maintain close relationships). Proximal efforts to affiliate with others are motivated toward the distal or end goal of forming interdependent and lasting relationships. Additionally, it appears that social interaction and bonding are not necessarily identical neurological processes: “the neural substrates for social engagement and selective social bonding are probably not identical, and is likely that the processes leading to social interactions differ from those necessary for a bond to form” (Carter & Keverne, 2002, p. 301). CBB Theory recognizes that social interactions serve a variety of human needs (e.g., procreation, autonomy, control), and these competing needs can and often do constrain individuals’ ability to engage in social interaction for the purpose of bonding.

For the purposes of CBB Theory, the need to belong is a better conceptualization of the fundamental internal need motivating the formation of relationships through manifest social behaviors. The need to belong creates a desire for social acceptance and inclusion (DeWall, Deckman, Pond, & Boner, 2011). To satiate the need, however, individuals will “seek and maintain some minimum number of strong and abiding relationships” (Leary & Kelly, 2008, p. 400). This need is distinct from the affiliation motivation because affiliation focuses on the *act* of being with, seeking out, and interacting with others. The need to belong is a desire for

acceptance and inclusion, which, once achieved, may reduce a need for further social behavior (Baumeister & Leary, 1995; DeWall et al., 2011). A need for acceptance and inclusion is more teleologically consistent with applications of evolutionary theory to human bonding. The satiation of the need is only possible through the formation of relationships, which are the primary mediator of investments in others and benefits to survival (Brown & Brown, 2006).

Consistent with motivational theory, humans can potentially enact a large variety of striving actions to satisfy the need to belong. However, no striving behavior actually satisfies the need to belong. Rather, the need to belong is ultimately satisfied in the formation and continuance of relationships, particularly close, interdependent ones (Baumeister & Leary, 1995). Once the need to belong is fulfilled, relationships become valuable resources for future need fulfillment because: (i) if an existing bond has succeeded in fulfilling the need, it is likely to do so again in the future; (ii) social resources previously invested in an existing bond may be unrecoverable if the relationship is not maintained; (iii) an existing bond may hold future benefits if the relationship partner continues to reciprocate, and (iv) once a relationship foundation is formed it may take less energy to maintain the relationship, providing a favorable cost-benefit exchange. When a tie meets the minimal standards of a relationship (i.e., stability, individuation, interdependence), it can be thought of as a relational reserve of potential social energy, which is capable of further development through reciprocation. CBB Theory's axiom on reciprocity (*Axiom 2*) suggests that the formation of enduring relationships implies an obligation for future returns. For example, by initiating further social contact or proffering an invitation to another social engagement, one friend puts energy toward satiating her or his own need to belong through developing and maintaining an existing relationship with the other friend. Although this action can be seen as a return on relationship investment from the perspective of the invited

friend, it is actually mutually beneficial to both friends. If reciprocal inclusion continues in a relatively balanced fashion, then the relationship escalates toward communal exchange (*Theorem Two*). Although the formation of close relationships is the distal outcome of the need to belong, striving behaviors undertaken during repeated social interactions strengthen the tie. This enables the satiation of the need presently and in the future, through the reciprocal communal tendency of concern for one another in close relationships.

Organisms typically derive some benefit from striving behaviors, even if anticipatory (Tinberger, 1951/1970). Otherwise they would not engage in those behaviors. That is, striving behaviors, while not directly satisfying the need itself, are rewarding to the organism, often physiologically and/or psychologically. To satisfy the need to belong, an individual must possess and maintain relationships. Therefore, individuals should be motivated to engage in communicative behaviors that are likely to form or strengthen relationships. It stands to reason that certain behaviors cementing a relationship are also rewarding in and of themselves. Although strong, enduring relationships ultimately increase human survival both in contemporary times (Hunt-Lunstad et al., 2010) and in the EEA, motivational theory would suggest that actions oriented toward the development of relationships are likely to benefit the organism in a more immediate, in-the-moment fashion. Consistent with motivational theories, the actions taken to resolve a need might be temporarily pleasurable or stress reducing even if the fundamental need fulfillment is unresolved or unmet (Tinberger, 1951/1970). Although they are likely to result in satiating a need in the long term through the relationship process, striving behaviors should benefit the organism physiologically or psychologically immediately, independent of the long-term need satiation.

Principle 3: Humans have a fundamental need to belong.

Axiom 3: Close relationships are expressions of the need to belong.

Theorem 3: Striving behaviors toward the need to belong provide psychological and/or physiological benefits to the actor.

Everyday Talk and Episodic Communication

CBB Theory contends that social interactions are not all equivalent in the ability to strengthen or develop interpersonal relationships and to satiate the need to belong. There is insufficient research to link the type of social interaction with the satiation of the need to belong. Research on the need to belong often employs experimental manipulations of social exclusion with little attention to the type of social interaction and the partner(s) with whom one interacts (Gere & MacDonald, 2010). Indeed, the nature of social interaction is often left undefined and undeveloped in most motivational accounts of human behavior. By contrast, theories of interpersonal communication are concerned with the nature, type, and form of communication within social interactions (Duck, 1994). Communication research has long explored the role of everyday talk (e.g., Berger & Kellner, 1964), and it has been profitably explored from the perspective of relationship initiation, maintenance, and development (Canary & Stafford, 1994; Duck, 1994). Indeed, everyday talk has long been considered a fundamentally relational act. Consider the definition of *phatic communication*: “a type of speech in which ties of union are created by a mere exchange of words” (Malinowski, 1923/1956, p. 315). One approach to understanding and characterizing everyday talk is the study of discrete speech events, called episodes.

A communication episode is a recognizable and purposeful speech event co-constructed by communicators and occurring within daily social interactions (e.g., catching up, joking around, small talk) (Goldsmith & Baxter, 1996). Communication episodes categorize the nature

of social interactions between relational partners, and, taken as a whole, could provide a useful inventory for examining how everyday talk affects or reflects individuals' social needs and relationship outcomes. When considering everyday talk from an episodic perspective, it is important to establish the appropriate level of analysis. Efforts to develop the communication episodes as posited by Goldsmith and Baxter (1996) have operationalized everyday talk (Schrodt et al., 2007) and suggested five overarching supragenres of everyday talk: superficial, informal, task, deep, and relational (Ledbetter, Broeckelman-Post, & Krawsczyn, 2010). When considered episodically, three speech events (i.e., joking around, recapping, relationship talk) are predictive of relational satisfaction among family members (Burns & Pearson, 2011). When all episodes are combined to measure everyday talk, the cumulative amount of talk is positively associated with relationship satisfaction among stepfamilies (Schrodt, Soliz, & Braithwaite, 2008). Although all three levels of abstraction (i.e., speech-event, supragenre, combined total) are valuable, for the purpose of theory development, the most promising is an episodic analysis of the role of everyday talk in relation to striving behaviors.

The categorization of meaningful speech events into episodes has several advantages for the purpose of developing CBB Theory. First, the episode categories are recognizable by researchers and lay audiences alike, which aids in linking the conceptual definition with measurement. Second, as a form of everyday talk, episodes are relationally oriented actions, conceptually linking manifest behavior to internal relational perceptions (Duck, 1994). Third, a few types of communication episodes have independent research traditions exploring their relational consequences and physiological outcomes (e.g., affectionate communication). These three characteristics help bridge research on everyday talk with the predictions of CBB Theory.

Specifically, the propositions of CBB Theory can aid in identifying which

communication episodes meet the conceptual definition of striving behaviors. To qualify as a striving behavior toward the fulfillment of the need to belong, a communication episode: (i) must be theoretically and conceptually consistent with bond formation or strengthening, and (ii) should have measureable physiological or psychological benefits. Several behaviors associated with relationship formation and pair bonding function like a primary reinforcers in that they elicit psychological and physiological benefits without a conditioned pairing (Carter & Keverne, 2002). Two communication episodes have shown such benefits: affectionate communication and self-disclosure.

The extensive research of Floyd and his colleagues (e.g., Floyd, 2006; Floyd, Hess, Miczo, Halone, Mikkelson, & Tusing, 2005; Floyd, Mikkleson, Hesse, & Pauley, 2007; Floyd & Riforgiate, 2008) shows that affectionate communication is positively associated with and can enhance psychological and physiological health. Affectionate communication is theorized to be adaptive for the purpose of establishing and maintaining a pair bond with a significant other (Floyd, 2006). Controlling for received affection, affection given is associated with less physiological stress both in self-report measures (Floyd et al., 2005) and when measuring cortisol levels (Floyd, 2006). Theory and empirical evidence suggest that affectionate communication is a clear example of a striving behavior toward the formation and continuation of close personal relationships. CBB Theory suggests that because affectionate communication is a behavior that helps to establish an enduring pair bond, it should also satiate the need to belong through relational development episodically and repeatedly across time. Indeed, a single strong, communal relationship can replace several weaker relationships, a suggestion supported by the importance of spouses for maintaining long-term health and well-being (Ren, 1997).

Self-disclosure is another speech event that is theoretically capable of cementing a social

bond and, thus, leading to a satiation of the need to belong. Self-disclosure has long been theorized to be a critical component in relationship development (Miller & Steinberg, 1975), and a necessary element in friendship intimacy (Fehr, 2004). There is good evidence that self-disclosure positively influences relationship development: Self-disclosure is positively related to liking, and liking is positively related to self-disclosure (Collins & Miller, 1994). There is also biological evidence of the benefit of self-disclosure. Compared to factually stating information about a stranger, self-disclosure is associated with activation of reward centers in the brain (Tamir & Mitchell, 2012). Compared to disclosing without an audience, sharing personal information with a friend or relative is also associated with greater activation of reward centers (Tamir & Mitchell, 2012). Self-disclosure meets the criteria of a striving behavior in that it has the ability to facilitate the distal goals of relationship development and maintenance, and it provides intrinsic physiological benefits. It is important to note that not all acts of affection or self-disclosure are presumed to have unequivocally positive effects on relationships and health. For the purpose of theory building, the empirical evidence suggests both behaviors fit the criteria of striving behaviors.

Research on other communication episodes suggests that some speech events are associated with greater fulfillment of the need to belong than others. Diary studies have demonstrated that talking about something that is personally meaningful is associated with increased feelings of relatedness or belonging (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). Motivation toward greater belonging with others is associated with seeking out personal conversations and writing personal letters (McAdams & Constantian, 1983), and adopting a communal, listening role in conversation with friends (McAdams, Healy, & Krause, 1984). These behaviors are likely motivated by the need to belong and appear to result in feelings of

relatedness. Compared to affectionate communication and self-disclosure, however, there is no known evidence of the physiological benefit of having serious conversations about matters of personal importance.

Gossip is another example of a communication episode that has been linked theoretically to belongingness needs and social inclusion. During the EEA, Dunbar (1996) suggests that humans began to engage in social grooming through conversation, particularly through gossip. He suggests that vocal grooming may have supplanted physical grooming in the EEA to allow for the cementing of social bonds among a larger social network whilst expending less energy. Gossip appears to strengthen liking between strangers, and is recalled to have occurred at a higher frequency in the early stages of now close relationships compared to now distant relationships (Bosson, Johnson, Niederhoffer, & Swann, 2006). However, there is little evidence linking the communication episode of gossip to need satiation or other physiological benefits.

Given the manifold forms of everyday talk and the lack of evidence regarding episodes' influence on relatedness or belonging, strengthening a bond, and physiological outcomes, more research is needed to establish the relationship between specific communication episodes and the satisfaction of needs. The following propositions are meant to guide future research efforts:

Proposition 3a: In order to function as striving behaviors toward the need to belong, communication episodes should provide psychological and/or physiological benefits to the actor.

Proposition 3b: Communication episodes functioning as striving behaviors toward the need to belong should facilitate long-term relational bonding.

Proposition 3c: When the need to belong is satiated, the motivation to engage in communication episodes functioning as striving behaviors should diminish.

Proposition 3d: Once enacted, communication episodes functioning as striving behaviors

toward the need to belong should temporarily diminish the motivation to produce other striving behaviors toward the need to belong.

Human Energy Management

CBB Theory states that communication episodes more capable of strengthening bonds will be more psychologically or physiologically beneficial to the actor. Energy expended in this way establishes and cements relationships, which are, in turn, likely to provide reciprocal returns over time. Taken in isolation, these concepts suggest that individuals should spend their time and social energy solely engaging in episodic striving behaviors. However, the types of everyday talk most frequently enacted appear to be *inversely* associated with strengthening relational bonds or satiating the need to belong. To illustrate, *Figure 2* provides an incomplete list of communication episodes arrayed by frequency and likelihood of being a striving behavior based on past research findings and conceptual reasoning. Deep, affectionate communication is associated with improved health and reduced stress (Floyd, 2006; Floyd et al., 2007) and is typically reserved for relational intimates, yet it constitutes less than 5% of all speech events (Goldsmith & Baxter, 1996). Positive and informal episodic communicative behaviors, such as gossip and joking or laughing, may both cement social bonds and increase relational satisfaction (Burns & Pearson, 2011; Dunbar, 1996; Reis et al., 2000), but are engaged in with only modest frequency (Goldsmith & Baxter, 1996). By comparison, purely instrumental and impersonal communication behaviors are negatively associated with feeling connected among friends (Reis et al., 2000), yet occur frequently (Ledbetter et al., 2010).

To explain why individuals do not act exclusively in ways that satiate the need to belong, CBB Theory extends the Human Energy Management (HEM) Theory of Communication (Davis, 1997) to the regulation of social interaction. The incorporation of theoretical concepts from HEM

Theory is foundational to CBB Theory. However, CBB Theory also extends HEM Theory by articulating how communication functions relationally, a topic upon which HEM theory is noticeably silent. HEM Theory poses the primary question, “Why do humans communicate?” CBB Theory extends and applies this inquiry to one of communication’s fundamental purposes, human bonding, to address *why* and *when* humans engage in relationally oriented communication, rather than communication in general. CBB Theory stipulates that relationships performed evolutionarily advantageous roles in human social systems, which simultaneously addresses aspects of why humans *continue* to seek out relationships in the present day, and extends HEM Theory into the realm of relational interaction. When considering *why* specific social aspects of human behavior were retained, physiologically or psychologically, across time and even across space within time (i.e., across multiple cultures), it stands to reason that evolution would favor more energy efficient systems, reallocating energy for survival, procreation, and parenting. The incorporation of existing theories into new communication theory is a critical part of the theory development process (Miller, 1987).

HEM Theory (Davis, 1997) provides a mechanism explaining the satiation of the need to belong that predicts why individuals would elect to engage in one communicative behavior over another. HEM Theory’s tenets are quite useful for conceiving of behavioral energy expended during social interaction by stipulating that individuals have a finite storage capacity for energy, and that social interaction is an energy expending process. Consistent with accounts of self-presentational effort (Vohs, Baumeister, & Ciarocco, 2005), HEM suggests that social interaction depletes human energy reserves. Energy intensive interactions are more depleting than less energy intensive interactions, with the degree of energy expenditure as a function of familiarity with the behavior, episode, person, and context (Davis, 1997).

The principle of energy conservation is a key contribution of HEM Theory. Humans are biologically oriented toward the reduction of extraneous energy expenditure both behaviorally and mentally (Davis, 1997). Conceiving of humans as cognitive misers has been applied to various cognitive processes (Fiske & Taylor, 1991). However, HEM Theory's emphasis on energy conservation is a critical explanatory factor for understanding the limits of social resources imposed by the costs of maintaining a social network. Offsetting the innate orientation to conserve energy is the principle of Human Energy Investment (HEI). Through HEI, humans seek high benefit energy investment opportunities to justify the short- and long-term costs of that investment. Given the principles of energy conservation and investment, humans should seek high social bond strength/low social energy expenditure relationships, but are constrained by mutual obligations of resource sharing and maintenance accompanying each relationship (*Principle 2*). Given limits on the time and energy individuals can spend on relationship formation and maintenance (*Axiom 5A* and *5B*), and the fundamental need to belong (*Principle 3*), humans must strategically invest in relationships.

HEM Theory's presumption of energy conservation and investment may be a direct consequence of balancing these opposing interests by human ancestors in the EEA. For both HEM and evolutionary theory, the expenditure of extraneous energy to maintain a relationship would be costly and maladaptive. It would increase relationship investment, but not necessarily further strengthen the bond or increase reciprocity. Careless investment of valuable resources and social time would crowd out other relationships that might be more advantageous and/or less costly. Therefore, high-energy and low-benefit relationships would be exchanged for low-energy and/or high-benefit relationships. The ability to maximize investments of social energy is adaptive, compared to systems that are less efficient, capricious, or lead to substantial

overinvestment in non-reciprocating others (Davis, 1997).

These mechanisms influencing reciprocal exchange in the dyad and energy conservation and investment have consequences for the size and function of individuals' social networks and overall group size. Given the definition of a relationship, humans are in a relationship with far fewer people than they can recognize, and have far fewer relationships than the total number of people with whom people are at least marginally familiar with. If an individual's social network is only composed of other humans with whom the individual shares a relationship, then an individual's social network size is constrained in two important ways for modern and ancestral humans alike. The first is simply a limitation of time, both within a day and over a lifetime. Investments in relationships are strategic, both in the sense that they balance benefits and obligations and that they manage the finite resources of human time and energy (Davis, 1997). Second, each additional group member requires a greater energy investment to maintain group cohesion. According to the principle of reciprocity, each new group member requires accompanying obligations of support, regard, and fair treatment (Sutcliffe, Dunbar, Binder, & Arrow, 2012). Larger social networks may create unmanageable obligations to all members, so larger groups splinter (Dunbar & Schultz, 2007). Dunbar and colleagues (Sutcliffe et al., 2012) suggests that the limit on group size was set during the EEA, where the size of human ancestors' clans or social networks resulted from a balance between competing costs and benefits (Dunbar, 1996). Larger human clans were more insulated from animal predation, and were protected against attacks from human competitors or aggressors. Yet, increasingly larger groups not only taxed individuals' limited social and temporal resources, they ran the risk of including free-loaders and inclusion of unknown and untrusted others (Sutcliffe et al., 2012). Group size had critical implications for survival rates, in that larger clans were more successful when competing

with smaller clans, especially at times of resource scarcity. Yet, clans bound together through ties of affiliation and reciprocity survive more often (Bowels, 2009), providing further evidence that such ties could have been selected through evolutionary mechanisms.

Principle 4: The tendency toward human energy conservation is a primary process of human existence (Davis, 1997).

Principle 5: Human behavior is an investment of energy for the purpose of maximizing future energy return (Davis, 1997).

Axiom 5a: Humans have a finite amount of time to invest in others.

Axiom 5b: Humans have a finite amount of energy to invest in others.

Theorem 5b: Because of humans' finite energy resources, at any given moment in time, there is a limit to the number of relationships an individual can claim and maintain.

Homeostatic Social Interaction

Given the principles of energy management, CBB Theory would predict that individuals are unlikely to engage in high energy expending social behaviors without immediate internal benefits or anticipation of long-term relational rewards. That is, individuals seek out rewarding behaviors where the relational or personal yield approximately reciprocates or exceeds the social energy expenditure. There is an additional consideration when attempting to explain individuals' choice of any given communication episode. The concept of *social homeostasis* is a key component of HEM Theory (Davis, 1997), motivational accounts of need satiation (e.g., Hull, 1930/1970), and some models of social behavior (e.g., Latane & Werner, 1978; O'Connor & Rosenblood, 1996). It suggests individuals regulate their social contact in a manner reflecting an underlying need state *and* the amount of social interaction in which they have previously

engaged. Though social energy is renewable, when all of an individual's social energy is expended at that moment of time, he or she will seek to limit further interaction. When an individual possesses a surplus of social energy, he or she will seek out social interaction.

Latane and Werner's (1978) animal model supported the existence of the *sociostat*, or an internal mechanism that helps social mammals maintain homeostasis in interactions. For rats, social deprivation increases social stimulation-seeking, and social satiation reduces further social contact. For humans, the choice to socially interact or spend time alone corresponds with individuals' desire for isolation at prior points of time in the day (Hall, in press; O'Connor & Rosenblood, 1996). That is, if an individual wishes to be alone, he or she is more likely to be alone at a future time, but if an individual wishes to be in contact with others, he or she is more likely to be in contact at a future time. Although individuals appear to act on their desires to be in social contact or to be alone, they are not always able to achieve their desired social state. Extrinsic and/or uncontrollable obligations and impediments conflict with the desired amount of social contact, presenting obstacles to regulating social interaction in a manner directly reflecting underlying belongingness needs. For example, workplace obligations may create impediments to achieving an optimal level of social contact; jobs may require individuals to have more or less social contact than they would otherwise desire. Accounting for external constraints, however, it appears that people select social environments matching their underlying dispositional and situational desire to be in social contact (Hall, in press; O'Connor & Rosenblood, 1996).

CBB Theory suggests that when electing to engage in any particular communication episode, individuals balance three potentially competing drives: the intensity of the need to belong, the amount of prior social contact in general or with a particular relationship target, and extrinsic contextual factors inhibiting access to relational partners or otherwise preventing acting

on these motivations (e.g., workplace responsibilities, committed romantic partners). However, HEM Theory would suggest an additional important factor regulating the choice to socially engage or not. Individuals should operate within the principle of energy conservation, wherein individuals will expend the least amount of energy necessary to satiate the need. This is consistent with motivational theory. When selecting among various potential striving behaviors, organisms expend the least energy possible (Hull, 1930/1970). A striving behavior that results in need satiation can attenuate to the point where it is a mere vestige of the original behavior. Typically, factors extrinsic to the organism prevent skipping ahead to need satiation or energy expenditure reduction directly (Hull, 1930/1970). Anything terminating the drive toward fulfilling a need will terminate the accompanying striving behaviors (Hull, 1930/1970). Striving behaviors can change and develop in relation to the environment or context. Energy conservation selects striving behaviors that are most efficient.

Taking into account both motivational theory and HEM Theory, both social interaction and striving behaviors are adaptable to changes in social network composition and access. This flexibility is adaptive for both modern and ancestral humans. When social networks change due to geographic, developmental, personal, or extrinsic factors, individuals appropriately adjust their social energy investment. This observation has important implications for both the motivation to socially engage and the choice to engage in striving behaviors toward the need to belong. Namely, both social interaction expenditure and enacted striving behaviors are transferable between existing and new social network members. Research on the affiliation motivation (e.g., O'Connor & Rosenblood, 1996) and the need to belong (e.g., Leary et al., 2012) conclude that whether with close relational partners or strangers, social interaction is likely a behavioral manifestation of an acute need to belong. Social interaction has the potential to temporarily

diminish the motivation to produce striving behaviors toward satiating the need to belong. Social exclusion intensifies this motivation (DeWall, Baumeister, & Vohs, 2008), in part because the excluded individual is likely to have unused social energy to invest through a lack of interaction. The optimal allotment of social energy expenditure is one that both satiates the need to belong and engenders social interaction with communal relational partners (Baumeister & Leary, 2001), a suggestion supported by the unique benefits of having close relationships and interacting with them regularly (Helliwell & Wang, 2011; van der Horst & Coffe, 2012).

Axiom 5c: Social interaction functions within a homeostatic system.

Theorem 5c: Humans will privilege relationships offering the highest relational yield in terms of satiating the need to belong and the lowest social energy expenditure.

Proposition 5c: Social interaction temporarily decreases the motivation to socially interact, and a lack of interaction and/or social exclusion temporarily increases the motivation to socially interact.

The CBB Model

Taken together, these principles, axioms, theorems, and propositions create a cohesive explanatory theory and model of communication's role in human relational development and maintenance. *Figure 3* is a visual representation of CBB Theory. Humans have an underlying need to belong (*Principle 3*). The arrow arising from this need represents the motivation to engage in social interaction. Individuals can socially interact in a variety of possible ways (i.e., communication episodes) and with a variety of other people. Some social interactions offer a higher yield in terms of personal and relational benefits compared to others. As *Figure 2* illustrates, when communication episodes strengthen relationship ties and immediate psychological and/or physiological rewards, then those behaviors are more likely to function as

striving behaviors (*Theorem 3; Propositions 3a-3d*). That is, the more likely an episode is functioning as a striving behavior, the more likely it will result in the satiation of belongingness needs and strengthen existing relationships. The result of any given communication episode varies by feelings of relatedness, which is theorized to be a proximal indicator of the need to belong being satiated. Simultaneously, all social interactions expend social energy. That is, not every social interaction will constitute striving behaviors that satiate the need to belong; social interaction only has the *potential* to satiate the need to belong. The consequence of social interaction on relational partners influences the people with whom the interaction was shared. Interactions can strengthen existing communal relationships or help in making a relationship be perceived as more close, thereby increasing the likelihood of long-term return on relational investment (*Theorem 2*). Alternatively, an interaction can be shared with exchange or weak communal relationships, which accompany few obligations to reciprocate.

The final component of the model illustrates the finding that both possessing more close relationships and socially engaging with close relational partners have positive long-term benefits. Although interacting with close relational partners is associated with greater well-being, there is evidence of diminishing returns for larger and more distant social networks (Helliwell & Wang, 2011). Therefore, social interactions with weak tie relationships are not theoretically expected to result in long-term well-being and health. Although not directly illustrated on *Figure 3*, CBB Theory contends that the choice to engage in any given social interaction is a function of four forces: the strength of the need to belong, energy conservation, the amount of prior social contact (i.e., the homeostatic function), and changes in extrinsic constraints (like food and safety, which can activate internal drives to attend to more immediate needs,). Taken together, these four forces affect the amount and type of social interaction at any given time.

Technology Applications

One important application of CBB Theory is exploring the centrality of symbolic and technological systems in modern social life. The model in *Figure 3* can be applied to contemporary media, including mobile and social media. The technological and symbolic affordances of modern media fundamentally modify and extend the potential to socially interact with others who are not physically co-present. Such affordances create interesting, and somewhat counterintuitive, applications of CBB Theory. One example is *social snacking* (Gardner, Jefferies, & Knowles, 2005). People who feel inadequately connected to others may *snack* on symbolic reminders of their social connections until they can engage in face-to-face interactions. Snacks can include rereading love letters, reminiscing, and looking at photos (Gardner et al., 2005). Engaging in these behaviors is also positively associated with experiencing a greater need to belong (Leary et al., 2012). According to *Theorem Three*, communicative behaviors most akin to striving behaviors can offer benefits to the actor. Social snacking research demonstrates that behaviors can be psychologically and/or physiologically beneficial, even if they fail to cement social bonds (e.g., writing to a liked celebrity) (Gardner & Knowles, 2008). Similarly, writing an affectionate letter to a loved one reduces one's stress, as measured by total cholesterol, even if the loved one never receives the message (Floyd et al., 2007). Independent of face-to-face interaction, which would have been the sole means of social engagement in the EEA, social snacking appears to protect individuals from the feelings of exclusion (Gardner et al., 2005). To the degree social media use resembles both social snacking (e.g., looking at pictures, writing messages to friends) and striving behaviors (e.g., self-disclosure), it may trigger a momentary intrinsic reward response. A future application and test of CBB Theory could explore whether social media use most resembling social snacking offers psychological and/or physiological

benefits to the user.

Furthermore, technological advances also typically increase human energy efficiency. This brings to bear *Principles 4* and *5*, derived from HEM Theory. Due to the principle of energy conservation, individuals will select low energy-expending actions over high energy-expending actions. Symbolic mediated communicative behaviors, such as writing or seeing a photo, are highly energy efficient compared to face-to-face interactions, yet can reduce motivation to satiate the need to belong (Gardner et al., 2005). Modern communications, particularly social and mobile media, offer a variety of social opportunities with very low energy expenditures. CBB Theory predicts that individuals would actively elect to engage in such behaviors due the principle of energy conservation. Additionally, when mediated social behaviors resemble striving behaviors, they may offer physiological benefits to the actor. If so, social media use that simulates episodic striving behaviors could be an example of a vestigial behavior, or a striving behavior reduced to the lowest level of energy expenditure, especially if it accompanies a perception of long-term relational maintenance. Technology has made it possible that symbolic and one-directional behaviors that resemble social interactions (e.g., writing a letter) could influence the flow of relational and interactive processes. CBB Theory would predict that mediated social snacking behaviors could temporarily reduce motivation to socially interact, particularly in ways most likely to satiate the need to belong and are more energy intensive. Technological affordances plus the tendency toward energy conservation could theoretically regulate the motivation to initiate face-to-face social interactions and/or engage in episodic striving behaviors.

O'Connor and Rosenblood (1996) suggest that social interaction is analogous to caloric intake. As individuals consume more social calories, they become satiated, and thus consume

less (e.g., engage in fewer interactions). Meaningless social interaction is analogous to consuming empty calories. Behaviors simulating face-to-face striving behaviors could present another form of empty relational calories. CBB Theory predicts that social media delivers on the low energy principle, but is unlikely to deliver on subsequent increases in reciprocity for long-term relationship investment. Due to a tendency toward energy conservation, social media use could constitute “empty” calories/striving behaviors toward the fulfillment of the need to belong because these actions fail to satiate the need to belong through the formation of enduring close relationships in the long-term. Self-disclosure on Facebook fails to inspire audience members to reciprocate and does little to enhance closeness within the relationship (Pollet, Roberts, & Dunbar, 2011), leading to sunk energy costs. More frequent posting on Facebook is associated with less relational closeness between specific friends (McEwan, 2013). Indeed, social media use in general is associated with loneliness (Song et al., 2014), which can be conceived of as a chronically unmet need to belong. CBB Theory would suggest that the use of social media is understandable given human’s desire to conserve energy and experience rewards, but not optimal for long-term satiation of belongingness needs.

Future Research Directions and Conclusion

CBB Theory seeks to answer questions regarding when and why individuals engage in different types of social interaction. The nomological network advanced herein provides a framework for understanding the factors brought to bear on human social systems. The theorems and propositions point to immediate areas of inquiry to clarify and test the theory. Beyond interpersonal and computer-mediated communication, there are other communication contexts applicable to the theory. For example, some relationships are more voluntary and other more obligatory. By definition, friendships are relationships of choice (Hall, 2011), and kin

relationships (i.e., parents, siblings, cousins) are comparatively non-voluntary. Family relationships are often a primary source of inclusion and affection (Floyd & Afifi, 2011), but can also fail to meet individuals' need to belong. Non-voluntary kin relationships have unique expectations of reciprocity that encourage investment of social energy and sanction a tendency toward severing non-reciprocating ties, even in the case of weak kin relationships (e.g., cousins, uncles). As such, kin relationships may have unique endurance due to greater implied reciprocity and unique costs associated with relationship termination. CBB Theory could be used to explore how individuals allocate their social interaction energy in line with these unique obligations of kin relationships. Additionally, CBB Theory offers insight on how relationships end. The theory would predict that humans avoid ending relationships in general because of the energy required to sever the relationship, the sunk costs associated with letting it deteriorate, and the start-up costs of relationship re-creation, especially when relationship maintenance costs are low. CBB Theory would predict that individuals are unmotivated to terminate relationships through action and would prefer to do so by inaction, or not to do so at all. This predicted tendency may help to explain the process of relational de-escalation and the purpose of minimal relational maintenance. Finally, CBB Theory speaks to the multilayered nature of social networks. Individuals have agency in determining which relational partner they choose to interact with. CBB Theory can explain who individuals interact with and how they interact, especially when the source(s) of belongingness need satiation changes, such as when beginning or ending a romantic relationship or experiencing exclusion or separation from friends. CBB Theory explains how and why individuals attempt to compensate when relationships do not meet the need to belong; they would seek out other relationships and engaging in striving communicative episodes to satiate that need through relationship escalation with alternative promising partners. CBB

Theory's focus on social ecology can expand interpersonal scholars' understanding of the regulation of social interaction with social network alters at varying degrees of closeness.

For years communication scholars have called upon researchers to develop theories drawing upon the tradition of the communication discipline while attending to the ongoing changes across disciplines and within people's lives (e.g., Berger, 1977; 2005). CBB Theory responds to those challenges by bringing communication research into line with the continually broadening and interdisciplinary purview of evolutionary theory and extending need to belong research into the realm of everyday talk and social interaction. Interpersonal scholars have long been concerned with personal relationships, and CBB Theory focuses on social interactions within close relationships, while allowing for a broader focus on one's social network. The theory orients researchers to look beyond social interaction within close personal relationships to understand how social interaction functions within an individual's homeostatic system. As a biological model, it offers the possibility of integrating important interdisciplinary findings regarding the effect of communication behaviors on stress, anxiety, loneliness, happiness, and well-being, while still grounding claims in human relationships and episodic communication. It provides testable propositions regarding the potential for communication episodes to facilitate the satiation of needs, strengthen bonds, and provide felt benefits to actors.

Although the goal of this monograph was to present an intact theory for others to use, this theory, like any other, is incomplete by nature and certainly has gaps in its overall framework. CBB Theory invites other scholars to test and examine its tenets to critique, test, revise, contribute, and further develop the theory over time. It is our hope that the present monograph provides a framework sufficiently complete to allow and facilitate this very activity. By moving beyond relational satisfaction within single, close relationships, and attending more carefully to

relational and personal regulation within broader social systems, communication researchers can use CBB Theory to contribute to ongoing conversations about well-being, friendship, and the good life.

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Figure 1: The Communication Bond Belong Nomological Network

Principle 1 (The Principle of Unique Relational Value): A human relationship is an adaptive mechanism enabling the recognition of a uniquely valuable other and streamlining decisions about the type and amount of investment of resources to be made in and to be expected from another.

Principle 2 (The Principle of Reciprocity): Reciprocity is the social process of establishing a general balance of energy investment across human relationships.

Axiom 2: Whether communal or exchange in nature, relationships are always established through reciprocity.

Theorem 2: The most sustainable relationships are those established and maintained through a general equilibrium of reciprocity as perceived by the relational partners.

Principle 3 (The Principle of the Need to Belong): Humans have a fundamental need to belong.

Axiom 3: Close relationships are expressions of the need to belong.

Theorem 3: Striving behaviors toward the need to belong provide psychological and/or physiological benefits to the actor.

Proposition 3a: In order to function as striving behaviors toward the need to belong, communication episodes should provide psychological and/or physiological benefits to the actor.

Proposition 3b: Communication episodes functioning as striving behaviors toward the need to belong should facilitate long-term relational bonding.

Proposition 3c: When the need to belong is satiated, the motivation to engage in communication episodes functioning as striving behaviors should diminish.

Proposition 3d: Once enacted, communication episodes functioning as striving behaviors toward the need to belong should temporarily diminish the motivation to produce other striving behaviors toward the need to belong.

Principle 4 (The Principle of Human Energy Conservation): The tendency toward human energy conservation is a primary process of human existence (Davis, 1997).

Principle 5 (The Principle of Human Energy Investment): Human behavior is an investment of energy for the purpose of maximizing future energy return (Davis, 1997).

Axiom 5a: Humans have a finite amount of time to invest in others.

Axiom 5b: Humans have a finite amount of energy to invest in others.

Theorem 5b: Because of humans' finite energy resources, at any given moment in time, there is a limit to the number of relationships an individual can claim and maintain.

Axiom 5c: Social interaction functions within a homeostatic system.

Theorem 5c: Humans will privilege relationships offering the highest relational yield in terms of satiating the need to belong and the lowest social energy expenditure.

Proposition 5c: Social interaction temporarily decreases the motivation to socially interact, and a lack of interaction and/or social exclusion temporarily increases the motivation to socially interact.

Figure 2: Communication Episode Frequency and Potential to Satisfy the Need to Belong

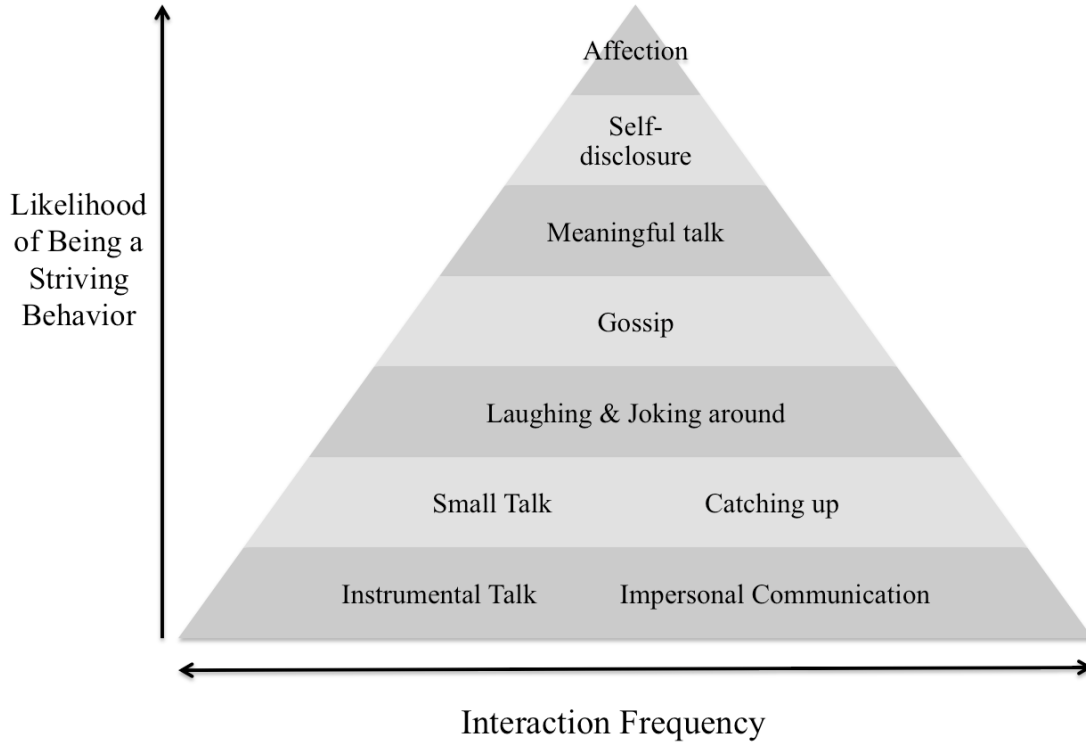


Figure 3: Conceptual Model for Communicate Bond Belong Theory

