

Fundamental Motives Illuminate a Broad Range of Individual and Cultural Variations in Thought and Behavior

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Abstract

An article published in *Current Directions* a decade ago introduced the fundamental-motives framework and reviewed initial promising findings using this general approach. According to this framework, a recurring set of challenges and opportunities during human evolution gave rise to overarching motivational systems in the domains of self-protection, disease avoidance, social affiliation, status seeking, mate acquisition, mate retention, and kin care. When activated, fundamental motives influence psychological processes by directing cognition and behavior in distinct and functionally relevant ways. In the intervening years, the approach has been expanded to a broader range of motives, individual and cultural variations in those motives, and the physiological correlates of activating different motives. In this article, we review a decade of research applying the fundamental-motives framework and point to promising new research directions.

Keywords

fundamental motives, motivation, cognition, evolution

What drives human thought and behavior? Maslow (1943) proposed a hierarchical, developmentally organized set of human motivations—including physiological needs (homeostatic processes such as hunger and thirst), safety needs (for protection from bodily harm), love needs (for affection and belongingness), esteem needs (for achievement and respect), and self-actualization (for realization of one's potential). To capture the related ideas that these needs unfold developmentally, with earlier needs taking priority over those developing later, needs are often represented as a pyramid. Five decades of research at the intersection of biology and the social sciences suggested a modern, evolution-informed renovation of this pyramid (Kenrick, Griskevicius, et al., 2010). This perspective, called the *fundamental-motives framework*, is based on the idea that a recurring set of challenges faced by human ancestors gave rise to a suite of universal, overarching motivational systems adapted to addressing the costs and benefits of social life (see Fig. 1).

The renovated pyramid maintained Maslow's (1943) hierarchical scheme, integrating the developmental

considerations of evolutionary life-history theory, which posits that an animal's energetic resources need to be differentially allocated to different tasks over the life span—beginning with somatic effort, followed by mating effort, and then, for many animals, parenting effort. The adaptive tasks under the umbrella of “somatic effort” (i.e., investment in development, maintenance, and survival) can be further divided into physiological, self-protective, affiliative, and esteem needs. Although all of these systems are present in adults, they develop roughly in sequence: Infants are initially concerned with hunger, thirst, and keeping warm; later, they develop fears of potentially dangerous strangers, and later still, they become concerned with forming friendships. It is not until friendships have been formed that older children become concerned with gaining respect of peers, and mate-acquisition concerns typically come on-line only after puberty. Mate retention and caring

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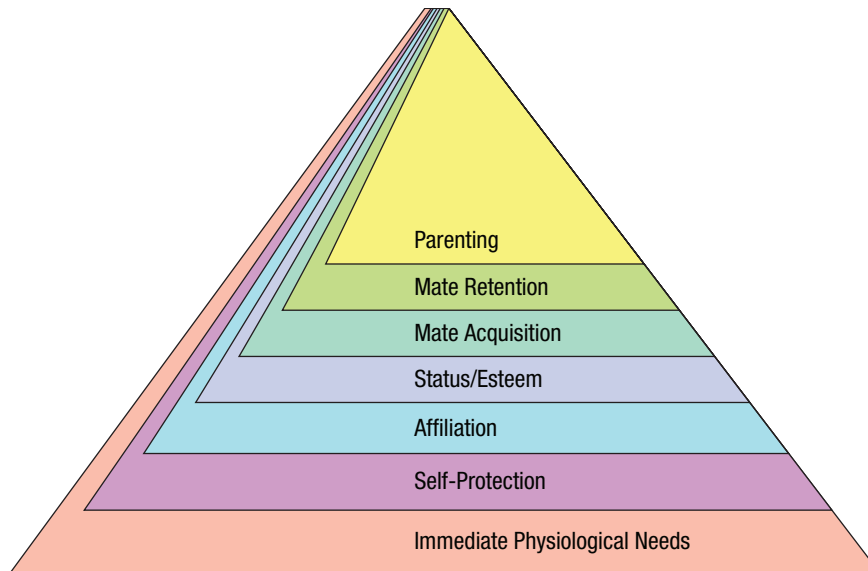


Fig. 1. The renovated pyramid of human needs (from Kenrick, Griskevicius, et al., 2010). This framework places motives sequentially in order of their developmental occurrence. Motives are depicted as overlapping, such that relevant environmental cues may activate any corresponding motive.

for offspring are not typically relevant until after successful mate acquisition (although people can care for kin other than offspring). According to this framework, all of these motivational systems exist in adults and are activated by environmental threats and opportunities (Kenrick, Griskevicius, et al., 2010). Once a given motivational system is activated, cognition and behavior are directed in distinct and functionally specific ways (Maner et al., 2005).

In the decade since it was described in this journal as a promising new direction (Kenrick, Neuberg, et al., 2010), researchers have applied the fundamental-motives framework to a range of psychological phenomena. In this review, we focus on the past, present, and future of this framework, summarizing (a) recent research supporting the framework and its social-psychological applications, (b) three theoretical developments since the original publication, and (c) several future directions for the framework.

Existing Support and Social-Psychological Applications

The fundamental-motives framework posits that recurring challenges to key domains of human survival and reproduction (i.e., fitness) led to the development of distinct overarching motivational systems (see Fig. 1). The depiction of these systems as overlapping implies that fundamental motives, rather than being satisfied once and for all, remain available for activation in

response to pertinent environmental threats and opportunities. Once activated, motives are presumed to direct attention to relevant cues connoting threats or opportunities, and to elicit functionally specific affective, physiological, and behavioral responses. For example, a self-protection motive can be activated by real or perceived threats, such as encountering out-group members. Once activated, that motive can increase vigilance toward potential social threats (e.g., greater attention to angry faces, enhanced memory for angry out-group members, and greater implicit bias toward groups stereotyped as dangerous), spur feelings of fear, and prime behavioral tendencies to manage the perceived threat (Neuberg et al., 2011).

It is important to note that the framework was based on theoretical considerations derived from integrating Maslow's (1943) hierarchy with ideas from evolutionary life history, rather than being derived empirically (from factor analysis, e.g.). The theoretically postulated motivational systems could be subdivided further and are presumed to deal with functionally distinct sets of problems, but not to be modular in any strict sense (Barrett & Kurzban, 2006). For example, the category of "immediate physiological needs" includes distinct systems, such as hunger, thirst, temperature regulation, and the avoidance of poisonous substances. At the other end of the pyramid, it would be perfectly justifiable, and in line with life-history theory, to further subdivide "parenting" to differentiate among parenting, grandparenting, and caring for younger siblings.

The framework is a useful way to think about important qualitative shifts over social development and generates more specific predictions than do common valence-based models of motivation, which tend to dichotomize behavioral outcomes as “negative” versus “positive” or as “approach” versus “avoid.” For example, acquiring friends, gaining status, and caring for one’s children are all ends that one might approach and associate with generally positive affect, but very different behaviors and affective states are associated with each motive (Kenrick & Shiota, 2008).

Early research using the fundamental-motives framework focused on the differing influences of self-protection and mate-attraction motives, demonstrating that they have distinct effects on classic social-psychological phenomena. For example, Li et al. (2012) revealed opposite effects of mating and self-protective motivation on the behavioral-economic bias of loss aversion—the tendency to evaluate losses more strongly than equivalent gains (Kahneman & Tversky, 1979). Participants evaluated losses and gains after being experimentally induced to feel either a self-protection or a mating motivation (by imagining themselves being alone in a house at night facing an intruder or on a romantic date). A self-protection motive increased loss aversion among both men and women, whereas activation of a mate-attraction motive decreased loss aversion among men, but not women. This supported a priori predictions: Given that men benefit from taking risks in mating contexts, their economic riskiness might increase in such contexts. These findings were uniquely predicted by this framework, and they indicate that even robust cognitive biases may be affected by functionally specific contexts.

Later research explored other motives. For example, there is a growing body of research on disease-avoidance motives. The physiological immune system is generally efficient at defending against invading pathogens, but it is energetically costly (e.g., requires production of antibodies to fight infection) and typically engages after harmful agents have already entered the body. Research on the *behavioral immune system* (Schaller & Park, 2011) investigates how disease-avoidance motives activate cognition, affect, and behavior to prevent initial exposure to pathogenic agents, thus providing a low-cost line of defense against potential illness. This system is calibrated to be overly responsive to cues of possible infection, which can include environmental stimuli (e.g., noxious odors) and cues from other people (e.g., coughing, rashes). This work addresses an array of individual-level and intergroup phenomena, including out-group prejudices and xenophobia. For example, Ackerman et al. (2018) noted that activation of the behavioral immune system (e.g.,

through exposure to foul odors or open sores) produces psychological responses spurring physical aversion and avoidance of targets perceived as threatening—even those presenting genuinely benign cues, such as disfigurements, disabilities, or obesity. Other effects include diverse preventative reactions (e.g., hand washing, restrictive sexual attitudes, endorsement of condom use). Overall, work on the behavioral immune system has provided robust support for predictable functions of a disease-avoidance motivation—and how, when salient, this motivation directs cognition and behavior in potentially adapted ways.

Researchers have also recently begun to pay greater attention to lesser-studied motives, such as kin-care motives—an expansion of the parenting motive proposed in the renovated pyramid. This motivational system is characterized by mechanisms to facilitate care of related others, particularly children (Schaller, 2018). Human reproduction does not stop at the birth of an infant; offspring must survive and reproduce. Indeed, human offspring have a long altricial period during which biparental care is highly advantageous. As is true of any motive, the kin-care motive can be chronically active—notably, among parents (Buckels et al., 2015)—and also situationally activated, even among nonparents (e.g., in response to superficial cues to infancy, such as creatures with small size and big eyes). When activated, a kin-care motive engages feelings of tenderness and behavioral responses facilitating care and protection. For example, in one study, parents for whom kin-care motives were activated via questions about their children reported increased perception of risk in various activities (e.g., horseback riding), subsequent risk aversion in a hypothetical gambling task, and decreased trust in strangers (Eibach & Mock, 2011). Although evolutionarily based research in psychology has focused extensively on mate acquisition, recent cross-cultural work examining people’s reports of their own current and chronic goals suggests that these kin-care motives are universally higher in priority (Ko et al., 2020).

In the renovated motives pyramid, parenting was placed on the top, unseating self-actualization (which was subsumed by other motives), and this change caused some controversy. From a functional perspective, no universal human drive—including the drive to realize one’s unique potential—can be meaningfully separated from biology. The pursuit of self-actualization, or of other types of well-being, should therefore be linked to fulfilling adaptive goals (Krems et al., 2017). Furthermore, people with different demographic characteristics, and at different life stages, would be expected to find fulfillment in achieving different primary life goals (e.g., mate attraction, kin care). In one study exploring

these predictions (Krems et al., 2017), participants were asked what they would be doing if they were pursuing self-actualization (fulfilling their unique potential), and were then asked to link their own descriptions to the various fundamental motives. Some participants did the same for pursuing eudaimonic well-being (meaning in life) or hedonic well-being (maximizing pleasure and minimizing displeasure). Whereas both men and women tended to view self-actualizing activities as linked to status and affiliation motives and tended to see activities furthering meaning as linked to affiliation and kin-care motives, men, but not women, saw activities furthering hedonic well-being as linked to mate-attraction motives (see Fig. 2). The importance of different motives for various forms of well-being was also predictably linked to demographic variables; for example, people with young children viewed kin care, rather than status, as integral to self-actualization.

Theoretical Developments

Researchers have proposed several theoretical extensions to the fundamental-motives framework, including links to individual differences, cross-cultural similarities and differences, and physiological mechanisms underlying the activation of motives.

One major extension is a scale measuring individual differences in fundamental social motives. Using factor analysis, Neel et al. (2016) identified seven primary fundamental motives, suggesting that these hypothesized motives are qualitatively distinct (e.g., self-protection and disease avoidance are not merely two components of a general threat-management domain), and further identified subfactors of mate-retention (i.e., breakup concern), kin-care, and affiliation motives (see Table 1 for a list of these motives and example items). Tests of convergent and discriminant validity revealed that these motives are related to, yet different from, other meaningful individual differences, such as the Big Five personality traits. For example, a group-affiliation motive consistently correlated positively with the Big Five traits of extraversion, agreeableness, and conscientiousness, and correlated negatively with neuroticism. Further, correlations indicated that none of the fundamental motives could be swapped for a Big Five trait and that the fundamental motives captured variance beyond that associated with Big Five traits, predicting specific behaviors even in analyses controlling for variance accounted for by Big Five traits. Group affiliation, for example, predicted participation in group-based activities typically associated with extraversion, such as playing team sports and volunteering, even when the analysis controlled for individual differences in extraversion.

Recent cross-cultural research lends credence to the universality of some motivational priorities. When participants from 27 countries ranked the perceived importance of fundamental social motives, familial motives (kin care and mate retention) consistently rose to the top priority across cultures (Ko et al., 2020). This was a somewhat unexpected finding, even as predicted demographic differences were supported (e.g., young adults, single people, and men ranked mate-seeking motives higher than older adults, married people, and women), because evolutionary researchers often emphasize the importance of mating motives, given their direct application to reproductive fitness. However, human offspring require great care, and raising offspring to reproductive maturity is also an integral component of fitness; thus, parenting is expected to be highly prioritized—and perhaps it is even additionally prioritized given its perceived links to eudaimonic well-being (Krems et al., 2017).

In a cross-cultural study underscoring the flexibility of fundamental motives, and particularly their responsiveness to ecological features, Scelza et al. (2020) examined romantic jealousy, an emotion linked to a mate-retention motivation. Across 11 populations, men consistently reported greater distress over sexual infidelity than women did, but cross-cultural variability also emerged. Respondents in societies characterized by greater parental investment and lower permissiveness toward extramarital sex reported greater distress toward sexual infidelity, a finding suggesting that fundamental motives may be universal and simultaneously responsive to normative influence and ecological pressures. Cultural variation in fundamental motives appears to be a promising avenue of exploration.

A third extension of the fundamental-motives framework concerns proximate biological factors linked to motive systems and suggests that activation of fundamental motives triggers concomitant physiological reactions, cognitive sequelae, and behavioral outputs. For example, Smith and Jordan (2015) found that experimentally induced threats to affiliation and status increased blood pressure, heart rate, and salivary cortisol responses, even as these different threats caused different reported affect (i.e., affiliation threats evoked anxiety, status threats evoked shame). Other work suggests that self-protection motives can lower olfactory thresholds for detection of potential contaminants, increasing vigilance to threatening stimuli (Chan et al., 2016). There are other observed links between physiological states and fundamental motives. For example, inflammation, engaged to protect the body from infection and injury, increases receptivity to social praise and vigilance against social threats, thus biasing perceptions in functionally relevant ways reflecting social-affiliation motives (Gassen & Hill, 2019).

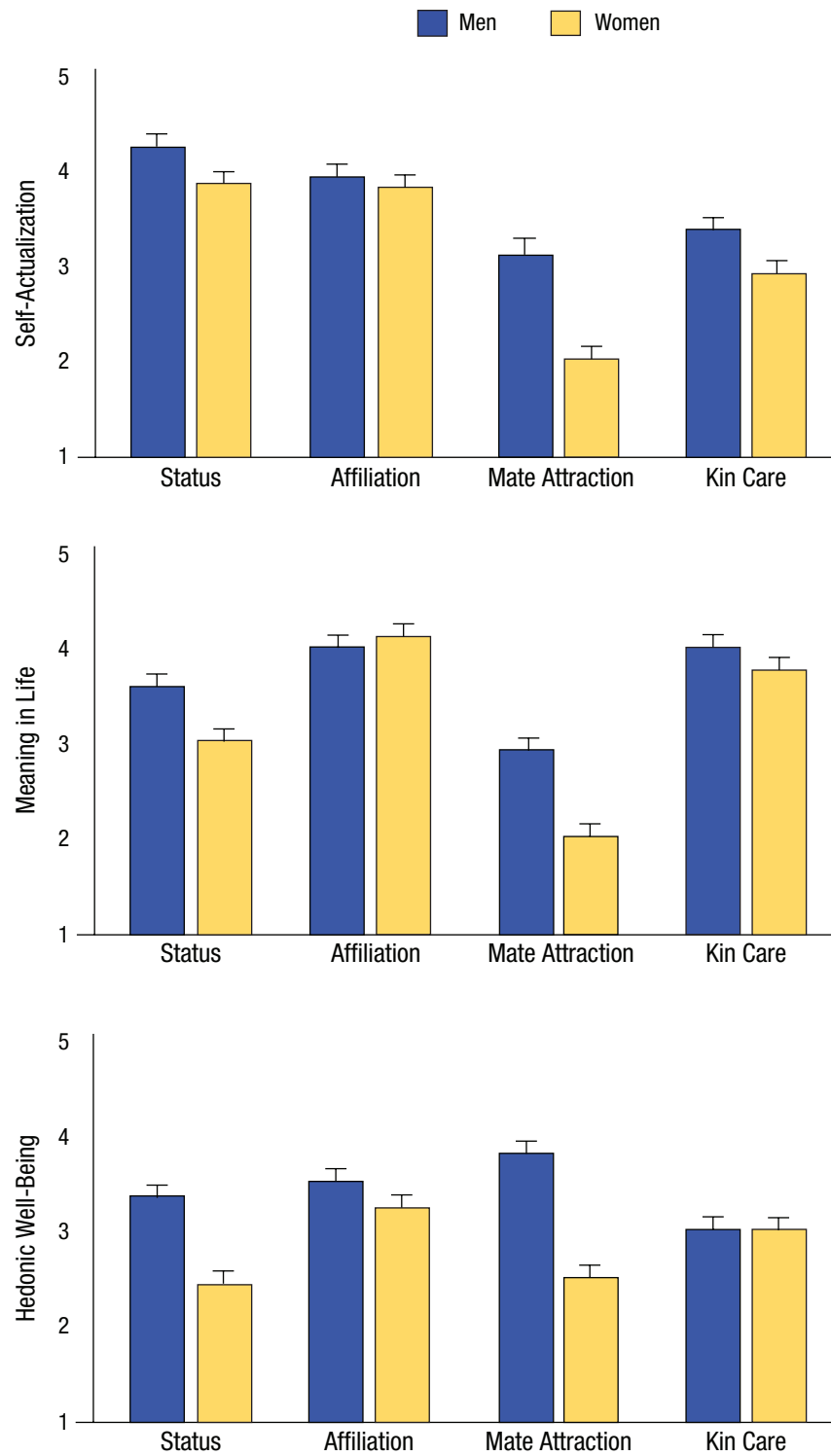


Fig. 2. Men's and women's ratings of the links between four distinct fundamental social motives and self-actualization, meaning in life, and hedonic well-being (from Krems et al., 2017). Ratings of the extent to which each motive was reflected by pursuit of each type of well-being were made on a scale from 1 (the motive was "not at all reflected") to 7 (the motive was "strongly reflected"). Error bars indicate 95% confidence intervals.

Table 1. Fundamental Social Motives Inventory (Neel et al., 2016): Selected Items

Subscale	Sample item
Self-Protection	I think a lot about how to stay safe from dangerous people.
Disease Avoidance	I avoid people who might have a contagious illness.
Affiliation (Group)	I like being part of a team.
Affiliation (Independence)	I would prefer to spend time alone rather than being surrounded by other people.
Affiliation (Exclusion Concern)	I would be extremely hurt if a friend excluded me.
Status Seeking	I want to be in a position of leadership.
Mate Seeking	I am interested in finding a new romantic/sexual partner.
Mate Retention	It is important to me that my partner is emotionally loyal to me.
Breakup Concern	I often think about whether my partner will leave me.
Kin Care (Family)	Caring for family members is important to me.
Kin Care (Children)	I like to spend time with my children.

Future Directions

The fundamental-motives framework has the potential to connect other seemingly unconnected bodies of literature. For example, the framework was used to integrate seemingly disparate threads in the extant literature on sexual prejudice (i.e., prejudice toward nonheterosexual individuals), to shed light on the conditions under which specific prejudices arise (or do not arise; Pirlott & Cook, 2018). Social groups are subject to multiple, and sometimes competing, stereotypes (e.g., gay men may be stereotyped as physically fit, hypermasculine, or feminine); active motives direct attention to stereotypes perceived as presenting motive-relevant threats or opportunities, and facilitate behaviors to address these perceived affordances. Consideration of fundamental motives thus allows researchers to predict

when specific stereotypes—those perceived to connote pertinent affordances—are likely to produce prejudiced reactions (see Fig. 3). For example, activation of pathogenic concern may increase avoidance of gay men because of stereotypes associating them with disease, whereas activation of status concerns among heterosexual men may prompt aggression against gay men as a strategy for reclaiming or asserting dominance. The organizing structure of the fundamental-motives framework can similarly be applied to explain nuances observed in extant research on other broad forms of prejudice (e.g., racism, classism).

The application of a fundamental-motives framework has also been useful for integrating conflicting findings regarding responses toward stigmatized groups. For example, the stigmas experienced by some groups (e.g., disabled individuals, older adults, or Black

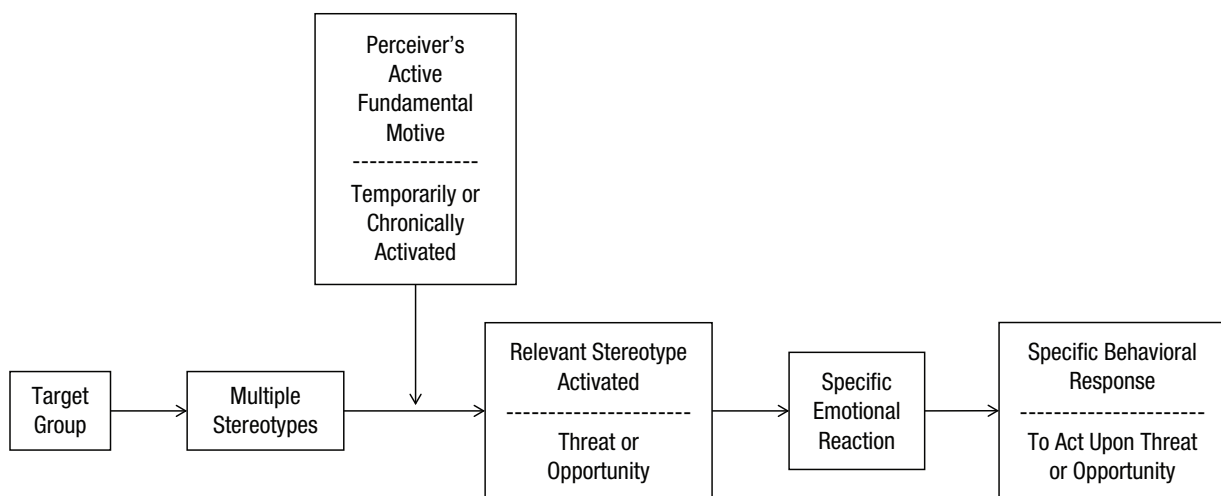


Fig. 3. Schematic illustrating how an activated motive dictates a perceiver's behavioral response to members of a target group. An activated motive determines which of multiple available stereotypes is deemed relevant, and the activated stereotype, in turn, elicits specific emotional reactions and engages behavioral responses to adaptively manage the perceived threat or opportunity (from Pirlott & Cook, 2018).

women) are often more likely to be characterized by indifference than by direct negative treatment. Neel and Lassetter (2019) proposed that groups stereotypically perceived to neither hinder nor facilitate fundamental motives (e.g., elderly individuals) are likely to face passive, invisibility-based stigmatization (i.e., to be ignored or overlooked), whereas groups stereotypically appraised as a threat to social goals (e.g., young Black men) are likely to face active stigmatization (e.g., discrimination or exclusion). In addition to helping researchers integrate previously conflicting findings regarding responses to stigmatized groups, the application of a fundamental-motives framework will allow researchers to generate specific predictions regarding the conditions under which active versus passive stigmatization is likely to occur.

Another direction centers on underexplored motives, such as the drive to make allies and a perhaps related but distinct drive to retain friends. Mating motives are parsed into distinct tasks of attraction (mate acquisition) and retention, but—perhaps reflecting the greater emphasis on mating in early evolutionary social science—less work has explored how people maintain affiliative bonds. Recent research on how feelings of friendship jealousy might be a tool to prevent the defection of friends is an initial foray into just one area of ally retention. Krems et al. (2021) found that feelings of friendship jealousy spur individuals to act in ways that might prevent the loss of valued friends; for example, friendship jealousy can cause individuals to increase the physical distance between their best friends and potential “friend poachers.” Other work remains to be conducted, to show the ways in which people engage in the maintenance of various affiliative bonds, including affinal bonds (with in-laws), neighborhood bonds, and so on.

An additional emerging area of research concerns interactions between motives. All motives cannot be pursued simultaneously; researchers are exploring the possible trade-offs between pursuit of different motives. For example, Beall and Schaller (2019) found a consistent inverse relationship between parenting and mating motives: Regression analyses suggested that greater orientation toward short-term mating was inversely related to liking and caring for children, and experimentally induced mating motives reduced emotional responses toward infants, whereas, conversely, experimental activation of parenting motives reduced inclinations toward short-term mating. These findings converge with work on life-history theory, which presumes that calories spent furthering parenting goals cannot be spent furthering mate-attraction goals (Del Giudice et al., 2016). Further work exploring the tension between satisfying different fundamental motives would

be useful. At the same time, pursuit of some motives could facilitate satisfaction of others. For example, achieving status might simultaneously facilitate mate-attraction goals, particularly for men. When different fundamental motives trade off against one another, and when they facilitate one another, is an area that remains relatively underexplored.

In the decade since our team reviewed preliminary findings regarding fundamental motives, the framework has produced a robust body of research and a better understanding of the functional, domain-specific nature of human behavior. The framework has helped to update long-standing models of human behavior—for example, reconsiderations of evolutionary psychology’s focus on mating behavior in light of recent evidence of the primacy of kin-care motives (Ko et al., 2020)—and continues to generate novel future directions for research. Such advances suggest that consideration of fundamental motives, coupled with situational context (i.e., domain specificity), can continue to shed a more nuanced light on understanding of human cognition and behavior.

Recommended Reading

- Kenrick, D. T., Griskevicius, V., Neuberg, S. L., & Schaller, M. (2010). (See References). Proposes the fundamental-motives framework, drawing from research on human motivation coupled with evolutionary biology’s focus on life-history strategies.
- Krems, J. A., Kenrick, D. T., & Neel, R. (2017). (See References). Links perceptions of self-actualization, meaning in life, and hedonic well-being to accomplishment of fundamental social motives (e.g., gaining status, making friends, caring for kin).
- Neel, R., Kenrick, D. T., White, A. E., & Neuberg, S. L. (2016). (See References). Proposes a scale inventory designed to measure individual differences in chronic activation of fundamental social motives and compares motive profiles with established individual-difference measures, such as the Big Five.
- Pirlott, A. G., & Cook, C. L. (2018). (See References). Integrates fundamental motives and a sociofunctional, threat-based approach to prejudice to propose a model for predicting under which conditions specific stereotypes are likely to facilitate prejudiced reactions toward nonheterosexual targets.
- Schaller, M., Kenrick, D. T., Neel, R., & Neuberg, S. L. (2017). Evolution and human motivation: A fundamental motives framework. *Social and Personality Psychology Compass*, 11(6), Article e12319. <https://doi.org/10.1111/spc3.12319>. Provides a summary, with concrete examples, of the fundamental-motives framework as a means for understanding human motivation and illustrates implications for human cognition and behavior.

Transparency

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