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Motivation and Emotion

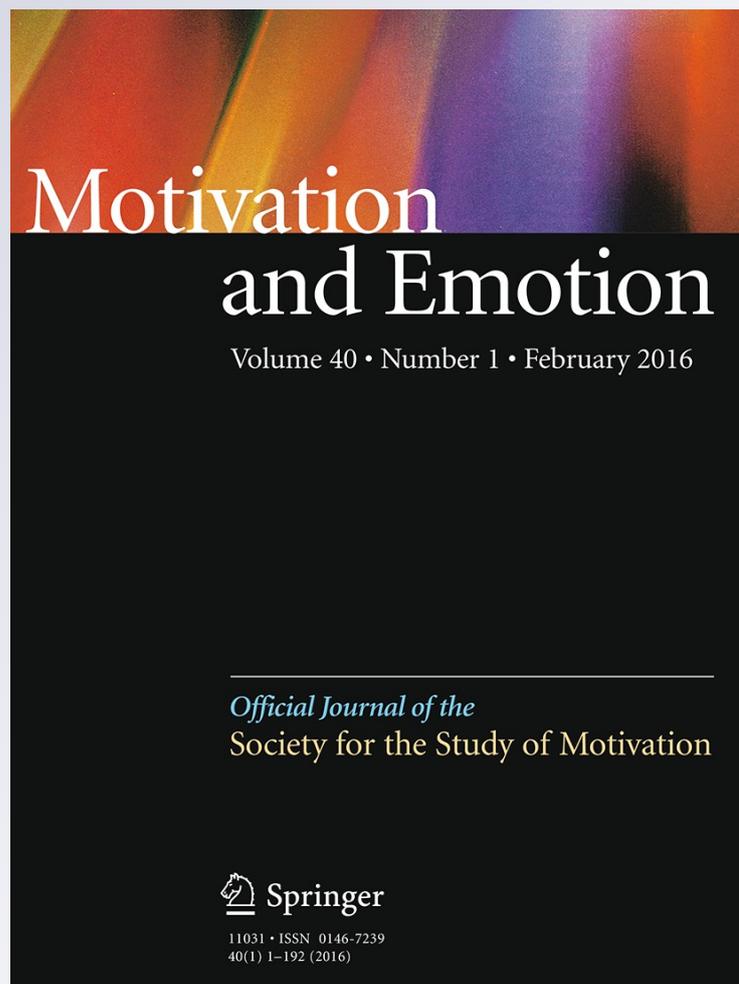
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A grand theory of motivation: Why not?

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Abstract Baumeister asks what a grand theory of motivation might look like, and he identifies the key problems, challenges, and opportunities that need to be considered in its pursuit. I address four of these challenges—how to define motivation, whether motivation is a state or a trait, the primacy of motivation in psychology, and the necessity to not only manage motivational conflict but also to vitalize motivational assets. I focus primarily, however, on the key obstacle that prevents a grand theory—our non-shared assumptions about the nature and dynamics of motivation. I suggest we capitalize on new advances in statistics, methodology, and technology to test what used to be untestable assumptions about motivation. Shared assumptions are necessary for a coherent science, and only a coherent science is capable of constructing a general theory.

Keywords Grand theory · Mini-theories · Motivation · Emotion

Introduction

Baumeister (2016) asks us all to pause from our specific programs of research, reflect a bit, and consider how each of our individual pieces of the puzzle might fit together into the big picture. Baumeister asks what a grand (or general) theory of motivation might look like, and he identifies the key problems, challenges, and opportunities that we need

to consider to bring a grand theory to fruition. To help in the effort, Kruglanski et al. (2016), Wright (2016), Bernard (2016), and Dunning (2016) provide rich commentaries on Baumeister's call to action.

I wonder whether we can do this, and this question stirs both optimism and pessimism. The optimism comes from knowing that motivation study has in the past rallied around a grand theory. It is worth remembering how enormously popular and central to psychology Clark Hull's drive theory was. My favorite statistic from that era is that half of all the articles published in the leading journals in the early 1950s (e.g., *Psychological Review*) included a reference to Hull's 1943 book. Another reason to be optimistic is that Kahneman (2011) recently offered what amounts to a grand theory of cognition, leading me to wonder "if he can do it for cognition, why can't we do it for motivation?" The pessimism comes from acknowledging that we are a diverse fellowship who routinely "agree to disagree" on the assumptions we make about the nature of motivation and how it works. My thesis is that these non-shared assumptions represent our primary obstacle to a general theory. To generate a grand theory, motivation study first needs to be a coherent science; and to be coherent we first need to agree on the assumptions underlying our subject matter. Before I address this problem of non-shared assumptions, I first consider four of Baumeister's problems, challenges, and opportunities.

Motivation is wanting change

The surest way to make progress in science is to improve on the conceptual definition of what one is studying. The classic definition of motivation is "any internal process that energizes, directs, and sustains behavior." Baumeister, however, suggests the simpler definition of "wanting

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change”—wanting to effect change in the self or change in the environment. This alternative is appealing for two reasons. First, the classic definition is only an inference-based definition (e.g., “If it looks like a duck, swims like a duck, and quacks like a duck, then it probably is a duck.”). It lists the tell-tale indicators of motivation (behavior’s latency, intensity, direction, persistence) rather than revealing the essence of what motivation actually is. In contrast, Baumeister’s definition identifies the active ingredient within any motivational state. Second, “wanting change” extends motivation’s downstream effects to include any change that is wanted, including not only behavior but also cognitions, self-concept, emotions, affect, the surrounding environment, the quality of one’s relationships, etc.

That said, Baumeister’s definition is limited by in one key way. Wanting necessarily requires a good deal of prior experience and learning. A lot of motivation, however, is forward-looking exploration, investigation, and foraging to check out new things and new possibilities. Jaak Panksepp refers to this as “seeking”, or as the seeking urge (Wright and Panksepp 2012). My overall reaction to Baumeister’s alternative conceptual definition of motivation is that it has merit, but “seeking” is as fundamental to motivation as is “wanting”, and this is true both in defining motivation and in formulating a grand theory.

States and traits

Motivation is always a state. It has never made much sense to me to talk about trait-level motivation, as if motivation was an enduring constant—she is intrinsically motivated, she has high self-efficacy, or he is an angry person. The problem with a motivational trait is that it has no way to activate itself (e.g., the amygdala does not spontaneously rouse itself). Instead of thinking of traits (“basic drives”), it is more fruitful to think of biological and psychological conditions within the individual as latent potentials that create internal conditions to more or less prepare momentary motivational states (“instantiated and contextualized impulses”). People possess enduring biological and psychological conditions (e.g., brain structures, needs, basic emotions, and personality dispositions), but each has an “open architecture” that allows new experiences to change them or to update them from something that is initially basic and generic to something that is later (with experience) more complex and individualized.

To reconcile the state-trait debate, Baumeister suggests the possibility that “Maybe the baseline moves!” Robert Bolles (1980) studied biological set points related to hun-

ger and eating, and he concluded that set-points (e.g., metabolism, size of one’s fat cells) did move; they reset themselves in the same way that the sea level or stock prices on the New York Stock Exchange reset themselves around a moving “settling level” in response to variations in biological, cognitive, emotional, social, and cultural conditions. Hence, I suspect that a grand theory of motivation will likely conceptualize motivation exclusively as states. In doing so, it will likely take the structure of a motivation mediation model (personal and environmental antecedents → motivational state → downstream consequences). If so, I suspect that the study of motivational traits will take on a greater developmental (repeated measures) focus to explain how and why enduring but latent motivational potentials change over time and across situations (e.g., longitudinal change in achievement strivings; Jenkins 1987; interest development; Hidi and Renninger 2006).

Motivation and emotion (primacy of motivation)

Baumeister (2016) offers a compelling argument for the primacy of motivation in psychology, suggesting that motivational concerns underpin and cause the means to get what one wants—namely, cognition, emotion, agency (engagement), social interaction, and even culture. This discussion stirs up the age-old question as to the primary of motivation *vs.* emotion. Baumeister takes the position that motivation is primary to emotion (e.g., emotion occurs only if events are motivationally relevant), while emotion theorists often take the other side. Silvan Tomkins (1970), for instance, used the example of air deprivation to illustrate the primacy of emotion. He acknowledge that air deprivation generates an attention-getting motivational state, but he argued that people act to get what they want and need (air) only because they first experience fear. Fear, he said, was the causal and immediate source of action.

Both sides of this issue can be well argued. To help frame that debate, I summarize in Fig. 1 the contrasting positions that emotion is but a subset of motivation (“a”; motivation is primary) *vs.* motivation is but a subset of emotion (“b”; emotion is primary). If we are going to create a coherent field of study, it strikes me as a necessary prerequisite that we first come to a consensual agreement on the relation between motivation and emotion. Emotion researchers have already come to a consensus as to the relation between emotion and affect (Ekman and Davidson 1994; Russell and Barrett 1999), so it is now time for us to do the same for motivation and emotion.

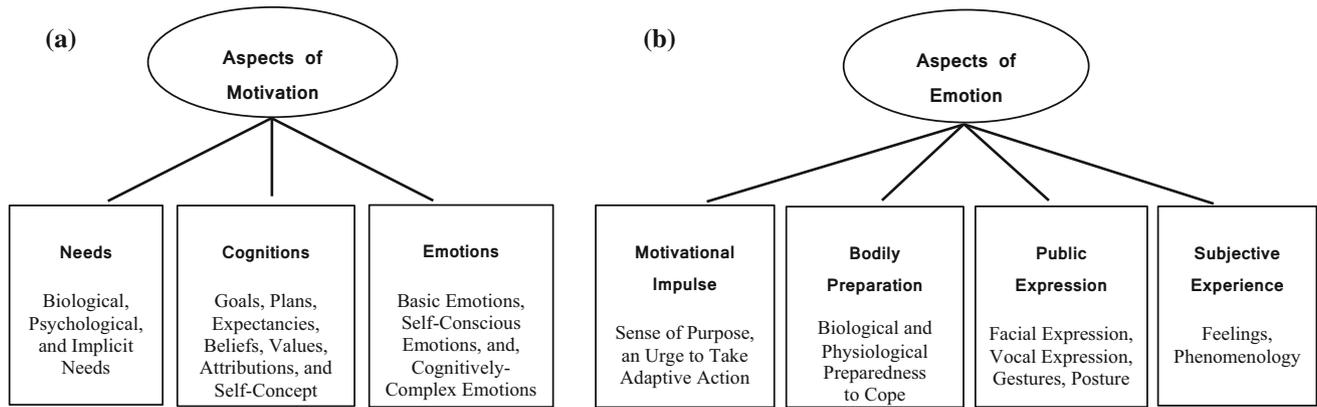


Fig. 1 Graphical representation depicting **a** motivation as primary to emotion (i.e., emotion is a subset of motivation) and **b** emotion as primary to motivation (i.e., motivation is a subset of emotion)

Basic motivations

Like many before him, Baumeister suggests that the most basic motivations are those to survive and to reproduce. These evolutionary-based motivations gave rise to social interaction and culture and, hence, to a wide range of derivative social motivations. People clearly strive to survive and reproduce, but what is the point of surviving and reproducing if one never gets anything done? I realize that gazelles have been surviving and reproducing on the savanna for millennia, and also that they have not gotten all that much done in all those years. For humans, however, it helps to get done the sort of things that significantly upgrade one’s chances for both survival and reproduction (e.g., invent tools, build shelters, learn how to analyze numbers). For instance, when medical doctors master their profession, they gain the knowledge and skill to dramatically increase survival (lower the infant mortality rate) and reproduction (create fertility drugs). Human motivations for competence and thriving therefore seem every bit as functional and basic as survival and reproduction, an argument nicely expressed by Robert White (1959) in his thesis on effectance motivation. This argument continues today in both mini-theories of motivation (e.g., intrinsic motivation; Deci and Ryan 1985) and in grand theories of motivation (Yang 2003). The result, at least in reference to human motivation, is that there are three categories of basic motivations—namely, genetic motivations to survive such as hunger, genetic motivations to reproduce such as sex, and genetic motivations to develop what one has such as self-actualization (Yang 2003).

Another way to distinguish between basic and derivate motivations is to use neuroscience data to distinguish biologically-basic motivations and emotions that arise from subcortical process from derivate motivations and emotions that arise from cortical processes. It seems profitable to understand how these two categories of

motivations and emotions operate in their own ways and also how they interact.

Motivational conflict and support

Baumeister argues that the study of motivation necessitates a careful understanding of self-regulation. This is because people have multiple motives that often conflict with one another (e.g., short-term appetites compete against long-term goals), and this motivational conflict needs to be managed.

This is a point well-taken, but I suggest it is only half of the story. I find it equally profitable to understand how people’s motivations can be appreciated and supported. In my own program of research, we study how supervisors (e.g., teachers) acknowledge, appreciate, vitalize, and support supervisees’ (e.g., students) often latent inner motivational resources, such as their psychological needs, intrinsic motivation, intrinsic goals, and self-endorsed values (for an overview, see Reeve and Cheon 2014). Working in a school context, we find that when teachers learn how to appreciate and support their students’ inner motivational resources during instruction, students show rather dramatic gains in their classroom functioning and educational success (Cheon et al. 2012). A grand theory of motivation will need to give as much attention to vitalizing motivational assets as it does to managing motivational vulnerabilities.

Clashing assumptions

Imagine a scenario in which the proponents of the various mini-theories of motivation get together to discuss what motivation is, where it comes from, and how and why it changes. How would a conversation go between, say,

representatives of behaviorism, social-cognition, cultural psychology, positive psychology, humanism, affective neuroscience, psychophysiology, psychodynamics, terror management, personality, social psychology, and evolutionary psychology? I fear that the basic obstacle to fruitful dialogue would be that the various theorists would be unable to agree on the basic assumptions about the nature and dynamics of motivation.

Here is the script that most contemporary programs of research in motivation study follow: Specify a theoretical position, derive a priori testable hypotheses from that theory, develop a methodology to test those hypotheses, collect and evaluate the data necessary to evaluate the hypotheses objectively (statistically), and draw conclusions. This is a fine script to build, evaluate, and refine a mini-theory of motivation (and to publish a journal article). The problem, however, is that this is not a good script to follow if one seeks to build, evaluate, and refine a grand theory of motivation, because this script overlooks the crucial first step in the process, which is to specify the assumptions on which the theory is based.

Motivation theorists are generally a collegial group when they work within the agreed-on structure of their particular mini-theory. It is only when they compare and contrast explanations derived from their specific mini-theory that the congeniality breaks down, the ingroup-outgroup conflicts arise, and the debate stalls into something akin to “you say toe-may-toes, I say to-mott-ohs.”

The assumptions on which a theory is based are typically taken as untestable articles of faith. Few researchers actually make the effort to figure out how to test their seemingly untestable assumptions, though rare exceptions do pop up. Sheldon et al. (2003), for instance, found a clever way to test Carl Rogers’ assumed inherent “organismic valuing process”. But finding ways to test the assumptions on which our mini-theories are built is precisely what will be necessary to open up the fortress-like walls that separate and divide the field’s various mini-theories.

Just because theoretical assumptions were not testable in the past does not mean that they remain untestable in the present. When Albert Bandura proposed reciprocal determination (a key assumption underlying social-cognitive theories of motivation), it was not a testable assumption. Today, with sophisticated statistical software such as structural equation modeling, it is. Freud famously assumed that much (most) of mental life was unconscious. Today, clever methodological advances (e.g., priming) and new measures (e.g., implicit association test) make the test of assumed non-conscious motivation an everyday affair. When Richard Ryan and Ed Deci proposed three inherent psychological needs of autonomy, competence, and relatedness (a key assumption underlying self-determination

theory), that too was not a testable assumption. Today, my colleague Woogul Lee and I use neuroimaging techniques to identify the neural basis of autonomy, competence, and intrinsic motivation (e.g., Lee and Reeve 2013).

The single most profitable path to the creation of a grand theory of motivation will be the willingness to design and carry out objective empirical tests of the key assumptions underlying our mini-theories. Assuming we can capitalize on advances in statistics, methodology, and technology, some of these assumptions will receive empirical support while others will not. If we can clear away the non-supported assumptions, then we will have the means to clear away the key barrier to a coherent science. Once we can have a productive dialogue about what motivation is, where it comes from, and how and why it changes (i.e., a coherent science), then we will be ready to create a grand theory.

Why did Clark Hull’s drive theory eventually fail? There are several reasons (Bindra 1974), but the key reason, I think, was that it became apparent to everyone that there were no little r_g ’s being acquired and modified in the muscle fibers of those maze-running rats. The existence of those r_g ’s was an assumption on which the validity of Hullian drive theory rested. When this and other assumptions of drive theory were found to be wanting, motivation researchers began to walk away (and walk toward an alternative that ushered in the cognitive revolution). To come back together, we will need to amass evidence-based agreement on what motivation is and how it operates (i.e., shared assumptions). That will give us a coherent science, and a coherent science will create the possibility of a grand theory.

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