Motives Working Together:

Value, Truth, and Control in Goal Selection and Pursuit

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A review of bestselling media today reveals broad popular interest in motivation and goal pursuit. Skim through the products offered by prominent online retailers and you will uncover thousands of items purported to reveal the secrets of motivation, enhance goal setting, and even broadcast one's interest in the topic through gear emblazoned with phrases like "Goal Digger" (Etsy, 2018; Walmart, 2018). This area is not only interesting to the general public; researchers have explored the psychology of goal setting and striving for decades (for reviews, see Bargh, Gollwitzer, & Oettingen, 2010; Higgins & Scholer, 2015). Over the years, these topics have been studied across a range of academic domains, including philosophy, economics, and psychology. In social-personality psychology in particular, there has been an explosion of research on motivation over the last 20 years, leading to the creation of the international *Society for the Science of Motivation (SSM)*.

The purpose of this chapter is to describe the primary forces that motivate people, as well as to review theories and research that explain how these motives influence goal-directed behavior. We highlight three motivational principles regarding the distinct ways in which people want to be effective: value (having desired results), control (managing what happens), and truth (establishing what's real). The importance to motivation of how these three ways of being effective *work together* is a fourth motivational principle. We provide both theoretical and empirical support for their status as primary motivational principles. We would also like to begin by highlighting two general motivational assumptions that underlie our perspective on motivation. First, we suggest that the influence of motivation on human experience is *pervasive*, with important consequences for cognition, affect, and action. Although some scholars have proposed that "cold" cognitive and "hot" motivational processes reflect distinct systems (e.g., Metcalfe & Mischel, 1999), we share the perspective of those who argue that these domains are indelibly intertwined and synergistic (see, for example, Kruglanski, 1996, Sorrentino & Higgins,

1986). Second, we posit that the mechanisms underlying motivated cognition and behavior *align with* and *build upon* general principles established within the broader field of psychology (e.g., knowledge accessibility and activation; Eitam & Higgins, 2010, 2016; Higgins, 1996).

To achieve these aims, we will begin by reviewing a range of perspectives on motivation. Then, we will turn our attention to how motivation relates to goal selection and pursuit. In brief, we argue that there are three primary motives that animate human experience—value, control, and truth—and that these core motives *work together* in an integrated fashion to direct both *which* goals people take on and *how* these goals are pursued (see also Higgins, 2012).

What Is Motivation?

To begin with, what do we mean by "motivation?" What does it mean to be motivated? Historically, motivation has been broadly viewed in two ways—as an energizing force and as approach-avoidance tendencies. After briefly summarizing these viewpoints, we will propose a third, complementary definition that we consider useful.

Motivation as an Energizing Force

When asked to define motivation, many people will describe it as a high-energy state. This conceptualization of motivation as "all-purpose energy" underlies a range of influential theories. Despite some differences in the hypothesized driver of motivation (e.g., biological needs *vs.* goal intentions), psychodynamic, behavioral, and Gestalt theorists considered motivation itself to be universal energy that creates tension within the individual and demands pursuit of the motivating need or goal. This idea of an energetic impulse is captured within Freud's conceptualization of instinctual energy (1957), Hull's description of the "evocation of action" produced by a drive (1943), and Lewin's proposal that force is a "tendency to locomotion" (1944/1997).

While we agree with the notion that motivation often manifests as energy directed at a task, this conceptualization does not reflect the reality that different goal pursuit strategies

complement *different* motivational orientations (Higgins, 2012). Additionally, this definition fails

to account for the differences in goal selection and pursuit when the goal in question is a desired

versus undesired end-state. For these reasons, defining motivation as "general-purpose" energy is

limited at best and misleading at worst.

Motivation as Approach-Avoidance Tendencies

Motivation also has been long conceptualized as a set of distinct, conflicting tendencies to

move toward desired reference points and away from undesired reference points, often described

in terms of *approach* versus *avoidance*. A number of well-regarded approach-avoidance models

have risen to prominence, which can be broadly grouped into three categories.

First, conditioning theorists came to appreciate the fact that inhibitory avoidance

tendencies conflict with excitatory approach tendencies. For example, Neal Miller recognized

that Hull's "goal-gradient" effect (1932), which suggested that people exhibit increasing effort as

they approach a goal, might reverse for avoidance goals. After demonstrating such approach-

avoidance conflict behavior through empirical research with rats, he revised the postulates within

his stimulus-response model accordingly (Miller, 1959).

Second, a new group of theories based on cybernetic and control-process models also

accounted for approach and avoidance behaviors. As an example, consider Miller and colleagues'

Test-Operate-Test-Exit ("TOTE") model, which posited that motivated behavior is produced

through a series of feedback loops (1960). Within each loop, an individual engages in approach

or avoidance behaviors in sequential attempts to minimize their degree of mismatch with a

desired state (Miller et al., 1960; for a more recent example of this perspective, see Carver &

Scheier, 1981, 1998).

Finally, dynamic models like John Atkinson's (1964) theory of achievement motivation

reflected the interplay between approach and avoidance tendencies within a narrower context.

According to Atkinson, all individuals with achievement goals experience a conflict between their hope for success and anxiety about failure, and resulting behavioral tendencies reflect the outcome of this excitation-inhibition conflict.

The prevalence of approach-avoidance theories is not surprising given how well the idea of movement toward or away from a goal corresponds with the phenomenological experience of motivated behavior. Indeed, the etymological root of the term "motivation" is the Latin word *movere*, which means "to move." But this is itself problematic specifically because it suggests that motivation constitutes approach or avoidance movement when non-movement is also motivated (e.g., suppression or inhibition), and monitoring, which plays a critical role in self-regulatory control, does not itself involve movement. Thus, once again this viewpoint on motivation is limited.

Motivation as Having Preferences That Direct Choices

As an alternative, complementary definition of motivation, one of us suggested that what it means to be motivated is the following (Higgins, 2012, p. 24): "*to have preferences directing choices*" (italics in the original). This definition differs from the prior two as these preferences reflect not only desired and undesired end-states, but also the *processes* of goal pursuit, including choices of which strategies and tactics to use in the goal pursuit.

It is important to clarify a few aspects of this proposal. First, the preferences described in the definition are not necessarily known or intentionally applied. On the contrary, these preferences may be unconscious and their implementation may be relatively effortless (see Eitam & Higgins, 2014; Higgins & Eitam, 2014). Additionally, the term "choices" is used in a broad, systemic sense within this definition, as these choices (just like the preferences that drive them) are not necessarily intentional or even consciously accessible (see Huang & Bargh, 2014). Furthermore, these choices are not expressed only through action or behavior. As Bargh and

colleagues (2010) point out in their recent chapter on goal pursuit, motivation can manifest itself cognitively or affectively. In fact, recent behavioral and neural work in the domain of motivated cognition suggests that motivational preferences are reflected in perception, attention, and memory (Hughes & Zaki, 2015).

The idea that perception may be influenced by motivational factors was highlighted by "New Look" theorists (Bruner and Goodman, 1947) who, in turn, were inspired by psychodynamic ideas. Research reveals that the preference for desired outcomes leads to an item of value being viewed as physically larger by people with a greater desire or need for that item. For example, children perceive coins as larger than identically-sized cardboard discs, and *poor* children view the same coins as larger than *rich* children do (Bruner & Goodman, 1947; see also Dunning & Balcetis, 2013).

Memory is also affected by motivational factors. Research on *shared reality* reveals that communicators' memories will be biased by others' beliefs to the extent that the communicators are motivated to create a shared reality with them by tuning their message to match those others' beliefs (see Echterhoff, Higgins, & Groll, 2005; Echterhoff, Higgins, Kopietz, & Groll, 2008). This desire for shared reality involves both social relational and epistemic (i.e., truth-seeking) motives. Indeed, the effect of message tuning on memory disappears when the "others" are outgroup members with whom the communicators are *not* motivated to share reality (Echterhoff, Kopietz, & Higgins, 2013). The role that epistemic motives play within shared reality highlights another important point. While early theorists hypothesized that motivated cognition resulted from preferences related to desired end-states (i.e., *value*), more recent research reveals that they also relate to motives for *truth* (e.g., Hughes & Zaki, 2015). The motive for truth is not the same as the motive for value. And each of these motives is different than the motive for control. Each

of these motives provides a different answer to the question, "What do people want?" Let us now consider how these three motives are different kinds of wants.

What Do People Want?

One of us made the following proposal about what it is that people want (Higgins, 2012, p. 41): "*to be effective in life pursuits*" (italics in the original). Once again, this proposal is not only about the end-state of goal attainment. It is also about the processes involved in goal pursuit and includes strategies and tactics of goal pursuit. There are three general ways to be effective in life pursuits: (1) to be effective in having desired results, which is *value* effectiveness; (2) to be effective in managing what happens, which is *control* effectiveness; and (3) to be effective in establishing what is real, which is *truth* effectiveness. We consider next the historical support for each of these general motivational principles.

Value

People are effective in the domain of value when they experience desired end-states and do not experience unwanted end-states. As a result, value motivation is closely connected with the approach-avoidance conceptualization of motivation.

Value's role as a primary motivating force has been long recognized by philosophers, economists, animal behaviorists, and social psychologists who have attempted to explain the motives that animate human (and, in some cases, non-human) experience. Below we review a range of perspectives that conceptualize motivation in value terms.

Drive theories: Motivation to satisfy survival-based needs. Drive theories are rooted in the idea that survival is an evolutionary imperative (Darwin, 1909). In order for an organism to survive, appetitive biological drives like hunger, thirst, and the desire to procreate must be

satisfied; as a result, the value of food, water, and sex relates to the degree to which these are instrumental in satisfying a biological need or deficit (Woodworth, 1918).

Early conditioning theorists were inspired by this notion and, as a result, treated the need to satisfy biological drives as the primary force behind motivated behavior. In an attempt to reduce value to its most basic terms, these theorists suggested that "primary motivation" be defined as action evoked by the animal or person's need to satisfy appetitive drives (Hull, 1943).

Interestingly, not all need-satisfaction theories have focused on *biological* needs. Social needs have also received representation within the psychological literature for some time. For example, Abraham Maslow posited that once physiological and safety needs were sated, people seek to satisfy needs for love and esteem—both of which are inherently social (1943). In the years since, researchers have explored a range of constructs related to the motive to establish and maintain positive, stable relationships with others, including needs for affiliation (Byrne, 1961; Shipley & Veroff, 1952), attachment (Bowlby, 1969), and belongingness (Baumeister & Leary, 1995). Though not directly reflecting "appetites," these social needs are certainly related to survival given that humans are social beings; social ineffectiveness threatens one's security and well-being.

Psychological hedonism: Motivation to approach pleasure and avoid pain.

Approximately 2,400 years ago, Aristippus described the hedonic principle to Socrates: "I beg to be enrolled amongst those who wish to spend their days as easily and pleasantly as possible" (Xenophon, 371 B.C./2018, II.1.13). Millennia later, in his writings on utility, Jeremy Bentham dedicated a full chapter to a similar definition, proposing that "[t]he motive in prospect, we see, is always […] some pleasure, which the act in question is expected to be a means of continuing or producing: some pain which it is expected to be a means of discontinuing or preventing" (1823, p. 169).

This principle offers several benefits in comparison to early drive theories. First, it aligns closely with the phenomenological experience of motivation; everyday life provides evidence for the notion that people wish to experience pleasure and avoid experiencing pain. Likely for this reason, the hedonic principle has received significant attention within lay conceptions of motivation, as captured within the notion of reward and punishment incentives, or "carrots" and "sticks." The hedonic principle also addresses a problem with drive theories—specifically, the fact that organisms sometimes behave in ways that contradict biological needs. As an extreme example, consider the problem of addiction: Injection drug users report very high levels of hunger and food insecurity, which are predicted by expenditures on drugs (Anema, Wood, Weiser, Qi, Montaner, & Kerr, 2010). This example highlights that, in some cases, urgent short-term needs that promote biological survival, such as the need for food, may be treated as subordinate to the motivation to engage in activities that produce pleasure.

By the middle of the 20th century, many motivational theories incorporated the influence of pleasurable and painful incentives. Kurt Lewin (1935) accounted for the powerful role of rewards and punishments in his field theory; by interacting with one's intrinsic interest in a goal, the resultant vectors produced by such incentives reflected the power of value motives to shape preferences and produce behavioral change. Later versions of drive theories also reflected the motivating role of incentives that were unrelated to the reduction of tissue deficits. For example, Clark Hull (1950) adapted his motivational model to reflect incentives' distinct contribution to action; this "value" factor represented the magnitude of the pleasure or pain inherent in the incentive. Additionally, in the years that followed, learning theorists built an entire body of work rooted in beliefs about approaching reinforcement and avoiding punishment.

As work on this topic advanced, research also revealed that pleasure and pain do not necessarily receive equal weighting in their influence over behavior. In their work on prospect

theory, Kahneman and Tversky (1979) proposed that the desire to avoid a potential loss is more motivating than the desire for a potential gain of the same size (but see Higgins & Liberman, 2018).

What is clear from this (very brief) review is that, for a very long time, hedonic experience has been considered to be a powerful contributor to the experience of value. Despite this fact, it is important to note that pleasure and pain are not the *only* factors involved in value effectiveness. Let us now consider (again, very briefly) several other drivers of value.

Value from shared standards: Motivation to meet personal and social reference points. In addition to the sources of value discussed above, people also derive value from meeting and exceeding reference points or standards. These standards are different from the needs described earlier because they are socially, rather than biologically, motivated; they reflect socially-constructed beliefs about what is desirable or undesirable. In particular, standards considered especially relevant to value are shared beliefs that individuals hold with significant others and those that are normative within their culture (see Higgins, 2019).

The standards that we share with significant others at an interpersonal level are typically treated as *personal* standards. Research testing self-discrepancy theory (Higgins, 1987) has shown that these standards are used as a basis against which to evaluate one's *actual* self (i.e., a person's representation of the attributes and characteristics that he or she actually possesses). The theory posits two distinct sets of personal standards, or self-guides, to which this actual self is compared: the *ideal* self and the *ought* self. The ideal self is the representation of the characteristics that one ideally wants to possess (i.e., the hopes and aspirations for the type of person he might become), whereas the ought self is the representation of the characteristics that one ought to possess (i.e., the duties and responsibilities he should uphold). If a comparison between the actual self and an ideal or ought self-guide reveals a match between the two, the

actual self is evaluated as having positive value; conversely, if this comparison reveals a discrepancy, the actual self is evaluated as having negative value.

In contrast with such personal standards, the standards of excellence that we share broadly with others in our society are often described simply as *values*. This term describes collective beliefs about which objectives are (or are not) worthy of desire, as well as which means of achieving these objectives are acceptable (see Merton, 1957). Such values are often defined at the societal or cultural level, and include objectives such as freedom and means like procedural justice. These values guide behavior by functioning as a socially accepted standard.

Value intensification: Engagement strength as a "signal booster." Until this point, our review of value has primarily focused on the *direction* of a value experience—whether it is associated with a positive or a negative motivational force. However, these forces also differ in *how* positive or *how* negative they are—their *intensity* (see Lewin, 1951). Importantly, the intensity of a motivational force—attraction or repulsion—can be strengthened without any impact on its direction by strengthening engagement in what one is doing. To be engaged "is to be involved, occupied, and interested in something" (Higgins, 2006, p. 442). Significantly, regardless of whether this stronger engagement is produced by the pursuit of the valued goal itself or by some other present activity, it can intensify the value experience of the goal pursuit. And when this stronger engagement is combined with hedonic factors that contribute a sense of direction to this value experience, this *directed* intensity would yield a willingness to invest more effort or energy in an activity if that was needed for goal attainment (Scholer & Higgins, 2009). Contributors to engagement strength include opposition to interfering forces, overcoming personal resistance, use of proper means, and regulatory fit (Higgins, 2006), with the latter being discussed in more detail later.

Control

Although value has received the greatest emphasis historically in the psychological literature, the motive for control has also appeared in several important theories. Control motivation is the desire to manage what happens, to have an effect on something. It describes the need to exert influence over oneself and others in order to either produce an effect or actively impede its occurrence. A person who is effective in the domain of control tends to be planful, organized, competent, autonomous, and generally interested in taking action. With this said, when not balanced by other motivational concerns, excessively strong control motivation may function to the detriment of the individual, predicting impulsivity and insufficient consideration of the right path forward (Cornwell, Franks, & Higgins, 2019).

Control effectiveness is fundamentally different from value effectiveness. Whereas value is primarily focused on the outcomes of goal pursuit, control is concerned with managing the process of goal pursuit. This motive for control can also overrule or outweigh value motives, as demonstrated within cases where pleasant outcomes are forgone in order to make things happen. Take the example of contrafreeloading, for instance, where an animal who has free access to abundant food pellets will choose to exert itself to receive the very same food by repeatedly pressing a lever on a mechanical device (Osborne, 1977). Such phenomena show how control is a primary motive in its own right. We review next several theories that highlight the importance of control motivation.

Psychodynamic theories: Controlling inner states. Sometimes people associate psychodynamic theories with value (i.e., pleasure and pain), but this neglects the theories' unique contributions to understanding control motives—particularly in regards to managing one's own inner states. According to Freud, the *Ego* is primarily responsible for this process, balancing and controlling the competing motivational forces of the *Id* (which basically cares about pleasure and

pain) and the *Superego* (which cares about standards from significant others and social norms; Freud, 1962). Freud believed that there can be emotional problems if either the Id dominates or the Superego dominates. What is needed is the Ego's management—control—of these inner dynamic forces.

      Effectance motivation: Controlling the external environment. Control motivation does not only pertain to inner states; people are also motivated to manage what happens in the world around them. In the early 20th century, Robert Woodworth introduced a new perspective on motivation, suggesting that rather than being motivated to *have* (i.e., to satisfy value-focused needs), organisms are primarily motivated to *do* (Woodworth, 1940):

> There is no more reason for saying that the muscles exist for the purpose of obtaining food than for saying that food is needed to supply energy for the muscles […] What we find in the young animal is activity directed toward the environment, along with the organic needs, and with no sign that one is more primitive and unlearned than the other. (p. 374)

      Later, Robert White (1959) introduced a new theory of motivation based on *competence*, defined as the capability for effective interaction with one's environment. He proposed that organisms also experience a persistent need to produce an effect within their environment—naming this motive *effectance motivation*. Importantly, he drew attention to a way that this control-focused motive was qualitatively different from value: Whereas value motives are outcome-focused, with satisfaction occurring through reduction of a drive or satisfaction of a need, effectance motivation is process-focused, such that "satisfaction has to be seen as lying in a considerable series of transactions, in a trend of behavior rather than a goal that is achieved" (White, 1959, p. 322). Finally, White described that this need for competence is rooted in an

evolutionarily adaptive tendency toward autonomous action, highlighting the primal importance

to an organism of controlling its own fate and that of others (1963).

Socially-acquired control motivation: Perspective-taking and internalization.

Although White (1963) briefly touched on social competence in his later writing, he proposed a

conception of social control that was hierarchical and often antagonistic, based on needs for

dominance, aggression, deference, and abasement (1963). More recent work highlights a less

competitive form of competence that develops through social interaction. In order to competently

select and pursue their goals, people need to know what others want them to do and who they

want them to *become*. By taking the perspective of these trusted others, people are able to infer

the goals and standards that these people hold for them, learning in the process what counts as

success versus failure. As an important example, consider the ideal and ought-self-guides

introduced when we discussed value motivation. Higgins (e.g., 1991; 2019) posits that these self-

guides are adopted by children (internalized) through social interactions with their caretakers:

Children look to their parents to understand the ideal (aspirations) and ought (obligations) self-

guides that function as goals to pursue and standards to follow. This requires that children take

the perspective of their parents and accept as their own goals and standards those that their

parents want for them. In doing so, these socially-acquired self-guides become the goals and

standards that will direct their future goal pursuit efforts, even when the parents are not present.

These internalized self-guides now control their choices.

Self-determination theory: Control via autonomy. The connections White introduced

between competence and autonomy have been expanded upon within Edward Deci and Richard

Ryan's self-determination theory, which proposes that three specific needs underlie all goal-

directed behavior (2000). Two of these needs—autonomy and competence—reflect control

motives. With this said, Deci and Ryan's conceptualization of *autonomy* is quite unique within the realm of motivation theories, so we focus on it here.

Autonomy refers to the need to experience volition by controlling one's own behavior so that it integrates with one's sense of self (Deci & Ryan, 2000). Self-determination theory suggests that the experience of autonomy depends on the degree to which a person's behavior is motivated by varying levels of external control versus intrinsic motivation (Deci & Ryan, 1980). Interestingly, Deci and Ryan (2000) proposed that whereas the need for competence underlies all motivation, full autonomy must be experienced for an activity to be truly intrinsically motivated. Autonomous motivation is associated with a range of positive outcomes, including improved academic performance (Wang, 2008), greater intentions to engage in healthy behaviors (Pavey & Sparks, 2009), and increased well-being (Sheldon, Ryan, Deci, & Kasser, 2004).

Self-efficacy theory: Judgments of personal capability to control. Albert Bandura (1977, 1982) also recognized that an important aspect of the human experience is the desire to create and manage what's happening in one's life. He and others have conducted extensive programs of research on perceptions of self-efficacy, which describe a person's judgments of their "operative capabilities" in a given situation—the degree to which individuals believe that they have the capacity to organize their cognitions and behaviors to produce a desired effect in a particular context. Research on this topic has revealed that self-efficacy beliefs affect the goals we take on, the effort we expend in their pursuit, the degree to which we persist in the face of difficulty, and our success in achieving desired outcomes (Bandura, 1997; Schunk & DiBenedetto, 2016).

Perceived agency: Control over outcomes. Control effectiveness is also related to the experience of agency, in which individuals feel that they are responsible for causing the events that occur around them (Metcalfe & Greene, 2007). Though similar in nature, judgments of

agency differ in an important way from self-efficacy beliefs: Whereas self-efficacy beliefs reflect the degree to which individuals believe they possess the capability to produce a specific response, perceptions of agency also reflect whether individuals believe they control the outcome itself.

Recent advances in research on metacognitive judgments of agency support distinguishing value and control as motives. For example, in a recent study using a video-game paradigm within which experimenters manipulated both the rewards participants earned as well as the degree to which participants could effectively control the cursor, participants' ratings of "flow" closely tracked the rewards they earned (i.e., value), whereas agency (i.e., control) judgments reflected actual hit rates (Vuorre & Metcalfe, 2016; for more on control feedback, see Nafcha, Higgins, & Eitam, 2016).

As another example, motivation researchers have recently developed a Sense of Agency Scale that directly measures one's long-term, cross-contextual experience of control over one's mind, body, and actions (Tapal, Oren, Dar, & Eitam, 2017). Specifically, this scale allows researchers to measure both the sense of positive agency (the feeling that one is control) and the sense of negative agency (the feeling that one is *not* in control). Interestingly, positive and negative agency only appear to be moderately correlated, opening up an interesting possibility for future research on the different factors underlying control effectiveness (Tapal et al., 2017).

Truth

Finally, we turn our attention to the motive for truth, which, compared to value and control, has received relatively less attention as a distinct motive in psychology and other disciplines—although it has certainly not been ignored. Truth motivation captures how people want to understand better the world around them and establish what is real. It manifests in wanting to be accurate, to be consistent, to know the right path forward (both morally and practically), and to share what's real with others (Higgins, 2012). Truth effectiveness is distinct

from value effectiveness as people will pursue truth even when it could lead to painful consequences, including being willing to die for what one believes to be the truth. Next we review a range of theories that capture this third primary motive.

Need for cognition: The motivation to think. To begin, the truth motive encompasses the need to think and understand. Maslow argued for the importance of cognitive needs, which drive learning, curiosity, exploration, and the search for meaning (1943). In doing so, he clarified that "[t]he desire to know and to understand are themselves conative, i.e., have a striving character, and are as much personality needs as the 'basic needs' we have already discussed" (1943, p. 385). A decade later, Cohen and colleagues (1955) conducted experimental research formally defining the need for cognition, defining it as a drive to "structure relevant situations in meaningful, integrated ways" (p. 291) and establishing it as a measurable individual difference distinct from the need for achievement. Years after, Cacioppo and Petty (1982) developed a Need for Cognition Scale and found that people with a high (*vs.* low) need for cognition prefer more challenging problem-solving tasks and, despite expending more mental effort, do not report greater frustration or mental discomfort from having done so. Most recently, work on trait curiosity has found that the motive to think, learn, and understand is associated with various positive outcomes, including increased well-being (Gallagher & Lopez, 2007) and a greater belief that one's life and goals are meaningful (Kashdan & Steger, 2007).

Cognitive consistency theories: Motivation to experience coherent reality. The motive for truth effectiveness manifests not only in the desire to understand and structure cognitions about outside situations, but also prompts people to ensure that their own cognitions and behaviors are consistent. One of the most influential theories regarding this need for consistency is Leon Festinger's cognitive dissonance theory (1957). Festinger posits that people want to maintain and maximize the consistency of their cognitions because dissonance—incoherence

among one's cognitions and behavior—is uncomfortable (1957). Resulting from wanting things to make sense, people will attempt to reconcile inconsistencies by changing their cognitions (e.g., attitudes) or their behavior. Fritz Heider's (1958) balance theory of consistency has also been highly influential. It posits that all situations are composed of entities (people or ideas) that are connected through positive or negative relations—sentiments (like or dislike) and units (entities that do or do not belong together). Heider theorized that people are motivated to maintain balance to establish order.

It should be noted that the existence of a *universal* need for cognitive consistency has been recently questioned (Kruglanski, Jasko, Milyavsky, Chernikova, Webber, Pierro, & di Santo, 2018). Kruglanski et al. (2018) argue that effects typically attributed to dissonance-reduction, for example, are better explained by an interaction between expectancies about different cognitive outcomes and the desirability of those outcomes. They note, for example, that individuals who hold unpleasant beliefs, such as their having a health problem, can actually welcome receiving inconsistent evidence. The motivation to change cognitions or behavior when there is inconsistency can also depend on the extent to which the cognitions involved in an inconsistency are beliefs that are shared with significant others (Rossignac-Milon & Higgins, 2018).

Lay epistemics: Need for closure. Arie Kruglanski's (1989; 1990) theory of lay epistemics posits that an individual's epistemic motivations can be classified based upon the person's disposition toward different types of closure. He suggests that people act as lay scientists by generating and evaluating hypotheses, and that this motivated process is prompted by discrepancies between one's actual state and a desired epistemic state. In line with this theory, evidence reveals that people with a strong need for *nonspecific* closure tend to engage readily in truth-seeking through hypothesis generation and testing, but stop as soon as any plausible

hypothesis is supported, as they are motivated to come to a "final" answer as quickly as possible.

On the other hand, those with a strong need for *specific* closure often remain within the

hypothesis-generation phase until they find the particular epistemic "reality" they seek, at which

point they stop seeking, and even avoid, alternative hypotheses.

Truth from accessibility: Motivation to reduce uncertainty. In addition to needs for

cognition and consistency, people are motivated to establish the truth about stimuli in cases of

uncertainty. Beyond simply lacking information, both ambiguous information and vague

information create a sense of uncertainty. A sense of certainty can be restored by categorizing

such information in a way that expresses clarity about what it is (despite it being unclear). For

example, research on accessibility reveals that the categorizations people make about another

person's behavior are affected by which applicable mental categories are most *accessible* at the

time of judgment, despite the level of accessibility (from priming or chronic accessibility) being

independent of the properties of that person's behavior (Higgins, 1996). In one study (Higgins &

Brendl, 1995), for example, participants were or were not primed with the construct "conceited."

In a supposedly "unrelated" subsequent study, they then read a short story about a student named

Sue. The story was written and tested to be highly vague, with most readers having no impression

at all of what kind of person Sue was. Nonetheless, those participants who were primed with

"conceited" *and* personally had "conceited" as a chronically accessible construct formed a clear

impression that Sue was conceited. A construct with high accessibility is experienced as

motivationally relevant (Eitam & Higgins, 2010), which increases the readiness to identify input

as matching the construct, yielding certainty from accessibility and categorization even for highly

vague input.

Shared reality: Motivation to co-create and socially validate truth. Similar to value,

the motive for truth is also inherently social. Higgins and colleagues posit that humans have a

fundamental need to co-construct and share their understanding of reality with others (Hardin and

Higgins, 1996; Echterhoff, Higgins, and Levine, 2009; Higgins, 2016, 2019). This need is driven

by both relational and epistemic motives, but we will focus on epistemic motives here given our

current focus on truth effectiveness. These epistemic motives reflect the need to establish

meaning and achieve understanding of the world (Echterhoff & Higgins, 2017; Echterhoff et al.,

2009).

Much of the research on shared reality has taken place within a "saying-is-believing"

paradigm in which participants are asked to describe a target person's behaviors to an audience,

and then the valence of their memories of those behaviors are assessed at a later time (e.g.,

Echterhoff, Higgins, & Groll, 2005; Echterhoff, Higgins, Kopietz, & Groll, 2008; Higgins &

Rholes, 1978). Participants first read a description of a target person (e.g., Michael) featuring

ambiguous behaviors that could be evaluated either positively or negatively. They are then told

that they will need to describe Michael to an audience who knows him, so that the audience will

be able to guess the target. Next, the experimenter casually mentions that the audience likes or

dislikes Michael. At this point, participants describe Michael to the audience, and typically they

"tune" the valence of their descriptions to match the attitude of the audience, such that

descriptions of Michael are positive when participants believe the audience likes him and are

negative when participants believe the audience dislikes him. More importantly, though, when

assessed after the primary task, even weeks later, participants' memories of Michael evaluatively

match the "tuned" message—demonstrating the creation of a shared reality. These studies reveal

that shared realities are created in cases where audience-tuned messages are treated as the truth

despite their actually being distortions from reality. It is the shared message that is treated as real.

Although shared realities manifest in various stages of development (including shared

practices, shared beliefs, and shared coordinated roles; see Higgins, 2016), here we would like to

emphasize *shared relevance*, which is at the core of every shared reality (Higgins, 2019). When individuals share relevance with others, they share what is important or worthy of attention—what is motivationally relevant. This concept of motivational relevance will play an important role as we discuss next how goals are selected.

Motivations Working Together

The three primary motives we just reviewed—value, control, and truth as three general motivational principles—do not operate in isolation. A fourth motivational principle is that these motives *work together* to influence goal selection (deciding *what* goal to pursue and *why*) and the goal pursuit process (deciding *how* to pursue the goal).

Value, Truth, and Control in Goal Selection

Goal choice is driven by the *motivational relevance* of potential goals at any moment in time that determines accessibility (Eitam & Higgins, 2010). Specifically, goals are assessed in terms of value, truth, and control relevance. But before continuing, we need to address the question, "What are goals?"

What are goals? Goals are mental representations comprising desired end-states and their means of pursuit (Kruglanski, Shah, Fishbach, Friedman, Chun, & Sleeth-Keppler, 2002; Shah & Kruglanski, 2000). Like other mental representations, goals vary in accessibility and may be activated either consciously or nonconsciously (e.g., through features within one's environment; Bargh, 1990). However, unlike *semantic* mental representations for which priming effects typically decay over time (Higgins, 1996), the activation of *goal* representations (particularly if co-activated with positive affect; see Custers, 2009) generally increases in strength until the goal is fulfilled (Förster, Liberman, & Higgins, 2005) or the goal is co-activated with negative affect (Aarts, Custers, & Holland, 2007). When activated, these representations appear to direct information processing about goal-relevant people (Chartrand & Bargh, 1996) and objects

(Ferguson & Bargh, 2004). Further, activation has been shown to produce cascading effects on behavioral intentions (Ferguson & Bargh, 2004), behavior (Bargh, Chen, & Burrows, 1996), and mood resulting from perceived success or failure (Chartrand & Bargh, 2002).

Goal types. Scholars have proposed a wide range of frameworks for categorizing goal types. Here we will summarize two classification schemes that have received considerable attention.

Promotion versus prevention focus. Regulatory focus theory posits the existence of two distinct, independent self-regulatory systems: promotion and prevention (Higgins, 1997). The difference between promotion and prevention is primarily a distinction within the domain of *value*, although these orientations are also related to particular goal pursuit strategies involving truth and control, as we will discuss further in our section on goal pursuit.

Individuals with a promotion focus are concerned with the presence or absence of positive outcomes (gains and non-gains), such as the goals associated with one's ideal self-guides. Promotion goals relate to aspirations, nurturance, growth, and progress. In contrast, individuals with a prevention focus are concerned with the absence or presence of negative outcomes (non-losses and losses), such as the goals associated with one's ought self-guides. Prevention goals relate to safety, security, and responsibility.

Importantly, these two orientations are relatively independent: A person can have a strong promotion focus and weak prevention focus (i.e., promotion predominance), a strong prevention focus and weak prevention focus (i.e., prevention predominance), or be strong in both or weak in both. Additionally, while people tend to sustain a chronic, long-term regulatory focus that reflects the historical motivational relevance of promotion and prevention value, regulatory focus is a *state* that can also vary across situations.

Recently, the difference between promotion and prevention has been highlighted as a "story of 0." If one's current state were represented as a status quo "0," promotion- and prevention-focused individuals would view it in fundamentally different ways (Higgins, 2018b; Higgins & Cornwell, 2016). Promotion-focused people are sensitive to the difference between "0" and "+1," with "+1" being experienced as a positive success (gain), and "0" (or anything below it) being experienced as a negative failure (non-gain). In contrast, prevention-focused people are sensitive to the difference between "0" and "-1," with "0" (or anything above it) being experienced as a positive success (non-loss) and "-1" being experienced as a negative failure (loss). What this means is that *neither* promotion-focused individuals *nor* prevention-focused individuals experience the state of "0" as neutral, as traditional approach-avoidance theorists might assume. Rather, promotion-focused individuals experience the maintenance of the status quo as a negative failure (non-gain), whereas prevention-focused individuals experience it as a positive success (non-loss).

In addition, the notion of goal *pursuit* implies that the pursuer is *not* yet experiencing the positive success of achieving the desired end-state. Instead, the pursuer is currently experiencing some kind of negative failure (i.e., a discrepancy from the desired end-state; see Higgins, 1987), with the kind of unsatisfactory state from negative failure varying by regulatory focus. Given that negative failures are experienced as non-gains in the promotion system, the current state of an individual pursuing a promotion goal is likely to be represented as "0". In contrast, given that negative failures are experienced as losses in the prevention system, the current state of an individual pursuing a prevention goal is likely to be represented as "-1". More research is needed to identify the experienced reference points for promotion versus prevention goal pursuit (Higgins & Liberman, 2018).

Regulatory focus also influences the degree to which people take on different types of goals. For example, consider risky decision making. People with a prevention focus are generally risk-averse with the goal of maintaining their satisfactory status quo. However, in cases of current loss when a risky option offers the only opportunity to recover from the loss (i.e., restore a non-loss status quo), individuals with a prevention focus are more likely to choose the risky option than those with a promotion focus (Scholer et al., 2010). Conversely, promotion-focused individuals, who tend to be relatively risk-seeking with the goal of making progress, choose the less risky option after they have made a significant gain (Zou, Scholer, & Higgins, 2014). In addition to these different goals that impact risk preferences, people with a promotion focus have task goals that prioritize speed versus accuracy, creative versus analytical thinking, and feelings versus reasons, with prevention-focused individuals preferring the opposite (Higgins & Cornwell, 2016).

Performance versus mastery goals. Another well-studied distinction is between performance- and mastery-oriented achievement goals (e.g., Ames & Archer, 1988; Elliott & Dweck, 1988; Nicholls, 1984). Performance goals are concerned with demonstrating sufficient ability in a particular domain, whereas mastery goals are associated with increasing the extent and scope of one's abilities over time. These orientations are associated with distinct implications for task choice. Whereas people with performance-oriented goals will sacrifice actual learning to ensure that they are able to demonstrate their abilities, and will select a level of task difficulty that maximizes displays of competence, people with mastery-oriented goals will prioritize learning and growth, even if it means that their immediate performance suffers.

Recent work suggests the performance versus mastery distinction is even more useful when goals are further distinguished as approach- versus avoidance-focused performance or mastery goals, as both performance *and* mastery *avoidance* goals predict undesirable outcomes

(Moller & Elliott, 2006). Conversely, whereas mastery-approach goals appear to be associated with interest, performance-approach goals offer unique benefits including persistence and achievement (Senko, Hulleman, & Harackiewicz, 2011). This model highlights the dynamic interplay among value, truth, and control motives. When a performance goal is set, control trumps truth, as the individual takes care to manage their goal pursuit to approach achievement or avoid self-evaluative failure. On the other hand, when a mastery-approach goal is set, the individual embraces the truth of their current level of proficiency and forgoes some immediate control to deepen their expertise.

How are goals selected? Most models of goal selection treat the process as rational, such as being guided by a maximization, "value X likelihood," analysis. For example, within their Rubicon model of action phases, Heckhausen and Gollwitzer propose that goal selection and pursuit take place within a sequential process comprising distinct phases, which are divided at a high level by deciding to take action—a step described as crossing a "psychological Rubicon" (1987). On one side of the Rubicon is the *predecisional* phase; on the other side of the Rubicon are postdecisional phases (*preactional*, *actional,* and *postactional*; Gollwitzer, 1990; Heckhausen & Gollwitzer, 1987).

Regarding goal setting, let's consider the predecisional phase. According to Gollwitzer (1990), the predecisional phase is characterized by wishing and deliberating. Wishes represent desired and undesired outcomes, and deliberations take into account both the desirability and feasibility of each goal option. One crosses the Rubicon upon committing to a goal and transforming it into a specific intention.

Despite differences in their specifics, many models of goal setting account for the value of a given outcome (e.g., "desirability") in combination with the likelihood of achieving the outcome (e.g., "feasibility"; see Bargh et al., 2010). Traditionally, this conceptualization of goal

selection has taken the form of subjective expected utility ("SEU") models. These models posit a multiplicative relation between the subjective value of each potential outcome and the subjective probability of each outcome (often described as its likelihood or expectancy), and they typically assume that the potential outcomes are mutually exclusive and exhaustive (Higgins, Franks, Pavarini, Sehnert, & Manley, 2013). It is important to note that despite seemingly accounting for truth and control via expectancies, traditional SEU actually emphasizes only *value* calculations, as expectancies are considered to only moderate the degree to which an option is valuable (see Higgins, 2012, and Higgins et al., 2013, for more detail on this point).

Atkinson's (1964) theory of achievement motivation was similar to SEU models based on its reliance on a value-likelihood calculation to predict goal selection (Atkinson, 1964). However, Atkinson included a new variable (a relatively stable personality characteristic called the motive to achieve) and, more importantly, a special assumption that the incentive value of an activity and its expectancy of success are decimal values that sum to one. Implicit in this assumption is the concept that challenging activities, which have a lower likelihood of success, generate greater pride upon their achievement because they have higher value. As a result, the model predicts that goals of middling levels of difficulty are most likely to be selected because value X expectancy is highest at .5 X .5. This special assumption is noteworthy because, unlike traditional SEU where likelihood simply acts as a moderator for value's motivational force, here Atkinson suggests that expectancies relate to worth in their own right. Similarly, Higgins (2012) argued that high likelihood or expectancy has high truth effectiveness because it makes a future outcome real rather than imaginary (Higgins, 2012).

In the years following, Wigfield and Eccles (2000) developed a more complex take on an expectancy-value model of achievement motivation. What makes their model distinct is that both expectancies and values are affected by beliefs about the specific goals at hand. These include

beliefs about one's ability to achieve this specific goal, which broadly relate to control effectiveness, with some truth involved as well.

Although SEU models seem to capture the phenomenology of how people evaluate goal options, reality may not be as straightforward as these theories suggest. For example, research reveals that expectancy judgments (i.e., the truth- and control-focused aspects of these theories) are affected by the desirability (i.e., value) of a potential outcome—motivated cognition. Specifically, the perceived likelihood of achieving an outcome—even a truly random outcome, like the draw of a card from a deck—has been shown to increase with the outcome's desirability in both grade-school children (Marks, 1951) and college-age adults (Irwin, 1953). As another example, people who are hungry report greater expectancies of winning a food incentive in a drawing (Biner, Angle, Park, Mellinger, & Barber, 1995).

Additionally, more recent research has revealed that the probabilities inherent in these models are not perceived as rationally as the standard models have claimed. Higgins and colleagues (2013) have found that the very same information about a particular event's probability of occurrence is treated as more or less *real* (i.e., as more or less likely) depending on how that probability is *expressed*. In these studies, for *both* positive future events and negative future events involving two possible outcomes (A or B), events *expressed* with high likelihood language (80% B) produced stronger engagement in, and more intense evaluative judgments of, objects in the *present* than the *same* probable future event expressed with low likelihood language (20% A)—making, at the same time, a liked yogurt even more liked and a disliked yogurt even more disliked. When a high-likelihood expression was used for a future event (whether it was a positive or negative event), the event was treated as more "real" (i.e., high in truth), which strengthened engagement in the present while preparing for this real future event.

This strengthened present engagement intensified the evaluations of the liked and disliked

yogurts that were being tasted in the present.

How are goals activated? Until this point, we have focused on theoretical distinctions

related to goal setting, rather than the specifics of how goals become active within the mind.

However, in order for a goal to be "selected" in the sense that it guides behavior, it must be

accessible and activated (Eitam & Higgins, 2010; Higgins, 1996a; Higgins & Eitam, 2014). In

this next section, we will highlight two approaches to understanding how this process works.

"Direct expression" account. Early research on automaticity suggested that priming a

social category would prompt the mental activation of stereotypic traits associated with the

primed group (Bargh, 1994). Inspired by James' (1890) "ideo-motor" notion, Bargh, Chen, and

Burrows (1996) proposed that this activation might, in turn, trigger an unconscious goal to

embody the trait within one's actions. To test this "direct expression" model and explore the

effects of environmental stimuli on goal pursuit, Bargh et al. (1996) presented participants with

primes (e.g., "Florida"; "Bingo") that activated the mental representation of the social category

"elderly," and then measured the participants' subsequent walking behavior after the study was

supposedly over. Notably, for most participants the social category "elderly" includes the

information that they walk slowly, but "walk slowly" was not itself primed in the study.

Spreading activation from "elderly" to "walk slowly" was expected to occur such that "walk

slowly" would be activated. This research supported a direct expression account: Compared to

control participants not primed with "elderly," participants primed with "elderly" walked slowly

while leaving the study, without any conscious awareness that the priming had influenced their

subsequent action.

Despite Bargh and colleagues' original (1996) findings, this specific effect is not always

found; across a wider range of studies, people primed with the concept "elderly" have *not*

consistently appeared to adopt the goal of walking more slowly (Doyen, Klein, Pichon, & Cleeremans, 2012). One explanation for the inconsistencies is that behavioral priming may be affected by subtle factors of which the original researchers were unaware, such as variable features of the experimental setting and individual differences among participant samples. Such additional factors could make the "walk slowly" phenomenon appear and disappear. The implications of this possibility are considered next.

*"**Motivated preparation to interact**" account.* Research exploring the motivational underpinnings of unconscious goal pursuit suggests one reason why these goal priming effects have not been consistently found. Cesario, Plaks, and Higgins (2006) proposed that people mentally represent members of social categories in the service of self-regulation, including preparing to interact with members of the social category. But preparation to interact with social category members would also be influenced by how one feels about them. Do you like them or dislike them? If you like them, then you use your knowledge of them to facilitate the interaction, to make it happen. But if you dislike them, then you use your knowledge of them to avoid interacting with them. This means that participants who like the elderly should walk slowly after being primed with "elderly," as Bargh et al. (1996) found, in order to facilitate interacting with them, but those who dislike the elderly should walk *quickly* after being primed with "elderly" in order to avoid them. Both the predicted replication *and* the reversal were found by Cesario et al. (2006; for further evidence supporting the "preparation to interact" account, see Cesario, Plaks, Hagiwara, Navarrete, & Higgins, 2010).

Motivational relevance: Value, truth, and control in goal activation. Given the importance of value, truth, and control motives in goal selection, it is not surprising that these motives also contribute to a goal's mental *activation*. Specifically, Eitam and Higgins (2010) offer a motivational account for goal activation in their "relevance of a representation"

("ROAR") framework, positing that activation is driven by the *motivational relevance* of a goal representation. And the motivational relevance of a goal representation is a function of that goal's current relevance to value, truth, and control effectiveness.

Value, Truth, and Control in the Process of Goal Pursuit

Similar to the process of goal selection, the same three primary motives work together to influence *how* people pursue the goals they take on. At a high level, we propose that truth and control motives primarily drive the process of goal pursuit, as both motives are inherent in an effective goal pursuit journey—what has been referred to as "going in the right direction" (Higgins, 2018a). Below, we will review several theories outlining how these motives work together in a complementary fashion to facilitate effective goal pursuit.

Cybernetic theories: Control-process models of goal pursuit. Cybernetic theories (Wiener, 1961) suggest that effective goal-directed behavior requires the integration of control, truth, and value. They posit that activity is produced through sequential feedback loops within which one's current state is compared to a desired end-state reference point. When one's current state does not match this reference point, behaviors are undertaken to move oneself closer to the desired end-state (i.e., reduce any discrepancy). Within these models, value is captured by the desired end-state reference point; truth is captured by the monitoring feedback information (how am I doing?); and control is captured by the action taken to reduce any discrepancy.

Beyond the TOTE model described earlier in this chapter, Carver and Scheier's (1981, 1998) reference point model has been influential in describing how motives interact within the process of goal pursuit. In particular, this model highlights how control and truth motives work together to facilitate gathering and acting upon self-evaluative feedback at two levels. Within the first level of feedback, which concerns one's journey toward goal achievement, the person engages in comparison, contrasting *input* information about their current state with a *reference*

value reflecting their desired state in search of discrepancies; when discrepancies are identified via error signals, an *output* is produced that drives action to minimize the mismatch. In addition to this first level of feedback, Carver and Scheier posit that a second layer of feedback tracks the speed at which discrepancies are reduced and manifests as positive affect (fast enough) or negative affect (not fast enough). This affect in turn impacts the urgency behind the output action.

Interestingly, this affective layer of feedback can produce effects that are not always helpful. For example, the positive feelings that arise when discrepancies are reduced faster than expected have been shown to produce "coasting" behavior whereby the individual reduces effort in the goal-directed activity, particularly when the person is close to attaining the goal (Louro, Pieters, & Zeelenberg, 2007; Fulford, Johnson, Llabre, & Carver, 2010).

Regulatory mode: Going in the right direction. Regulatory mode theory proposes that there are two basic, independent self-regulatory functions that work together to produce goal-directed activity (Higgins, Kruglanski, & Pierro, 2003; Kruglanski, Pierro, Mannetti, & Higgins, 2013; Kruglanski et al., 2000). *Assessment* is fundamentally related to truth motives, and it constitutes the motivation to compare and critically evaluate options in order to identify the right option. *Locomotion* is fundamentally related to control motives, and it constitutes the motivation to move away from the current state in order to effect change (Higgins, 2012; Kruglanski et al., 2013) Just like strength of promotion and prevention, strength of locomotion and assessment can vary across individuals as a chronic predisposition as well as vary situationally.

Further, assessment and locomotion are typically most effective when they constrain each other, such that neither is overly active or dominant (Higgins, 2018a; Pierro, Chernikova, Lo Destro, Higgins, & Kruglanski, 2018). For example, individuals who are too strong in assessment often experience greater regret and rumination as a result of failure, which can be detrimental to subsequent goal pursuit (Pierro et al., 2008). Strong assessment also appears to be associated with

distress from the possibility of making the "wrong" decision (Chen, Rossignac-Milon, & Higgins, 2018). On the other hand, when individuals are too strong in locomotion, they may make impulsive decisions that lead to ineffectiveness in the domain of control (Mannetti et al., 2009). Strong locomotors are also known to engage in unwarranted self-flattery (Komissarouk, Chernikova, Kruglanski, & Higgins, 2018). That said, when they are both strong and well-balanced, assessment and locomotion generally work together to promote effective goal pursuit in a variety of domains, such as GPA (Kruglanski et al., 2000), retirement savings (Kim, Franks, & Higgins, 2013), and teamwork (Mauro, Pierro, Mannetti, Higgins, & Kruglanski, 2009).

Regulatory fit: Aligning motivational orientations and goal pursuit strategies.

Research has also established that goal striving benefits from a match between individual motivational orientations and the strategic manner of goal pursuit—*regulatory fit* (Higgins, 2000). For example, individuals are more interested in doing an activity again later when the manner in which they originally did the activity was a fit, rather than a non-fit, with their motivational orientation toward that activity, such as doing an activity in a serious manner (fit) rather than in an enjoyable manner (non-fit) when they consider that activity to be important (Higgins, Cesario, Hagiwara, Spiegel, & Pittman, 2010). Doing an activity in a non-fit manner undermined interest in engaging in that activity again. Thus, for the activity that participants considered to be important, having them do it in an enjoyable manner actually subverted their interest in doing it again later. Lesson: adding fun to an activity is not always a good idea.

In another study on regulatory fit, Avnet and Higgins (2003) had participants choose among different book-lights using different decision-making strategies. Those participants who made their decision using a strategy that fit their regulatory mode orientation offered much more of their own money to buy their choice (which was, intentionally, the same for everyone). Locomotion-induced participants experienced fit when they used a progressive elimination

strategy of removing one option at a time as they progressively considered different features of the book-lights. In contrast, assessment-induced participants experienced fit when they used a full comparison strategy of critically comparing all of the options to one another for all of the book-light features before making any decision (see also Mathmann, Chylinski, de Ruyter, & Higgins, 2017).

There is evidence that the benefits of regulatory fit are wide-ranging. In the domain of health, for example, a field experiment testing the effects of promotion- versus prevention-focused messaging within a physical activity guide found that regulatory fit (eager messaging for promotion; vigilant messaging for prevention) resulted in increased activity (Latimer et al., 2008). Other recent research found that a fit between an exerciser's induced regulatory focus and the exercise environment—specifically, whether one counts up (fit for promotion) versus down (fit for prevention)—improved actual performance across a range of calisthenic exercises (Kay & Grimm, 2017).

In the domain of sports performance, Plessner, Unkelbach, Memmert, Baltes, and Kolb (2009) studied the performance of football (soccer) players in the German Football Association. In particular, these researchers examined the effects of regulatory fit between participants' chronic regulatory focus (i.e., whether these players generally tend to be either prevention-focused or promotion-focused) and the regulatory focus of a given task, as framed by coaches' messaging. They found that prevention-focused players had more success in scoring goals during a shootout practice of five tries when the coach used a vigilant message ("Your obligation is not to miss more than two times") than an eager message ("Your aspiration is to score at least three times"). The opposite was true for the promotion-focused players.

Motivational harmony: Effective integration of value, truth, and control motives. A broader experience of fit has also been identified among individuals who indicate relatively equal

and strong motivations to be effective in value, truth, and control (Cornwell et al., 2019; Higgins, Cornwell, & Franks, 2014). Cornwell, Franks, and Higgins suggest that when there is a "proper mix" of all three motives, working together in a balanced way, a sense of fit between individuals and the world around them is created that manifests in a global feeling that life is going "right," which ultimately contributes to one's experience of happiness and meaning in life. Their research has found that motivational harmony is positively associated with life satisfaction, balanced character strengths and virtues, and moral behavior.

Concluding remark. In this chapter, we reviewed a range of historical perspectives on the question of what motivates people, and then discussed how the motivational principles of value, truth, and control, and the motivational principle of their *working together*, influence both goal selection and goal pursuit. We described how different motivational orientations and strategies—both on their own, as well as in combination with one another—appear to offer a range of benefits, as well as potential drawbacks. By understanding better how motivation works, people can apply the motivational principles to be more effective in goal selection and goal pursuit, thereby "going in the right direction" and experiencing "the good life" on a more regular basis.

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