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Needs Find a Way

Means-Shifts, Domain Jumps, and Leaps of Faith

L. Maxim Laurijssen and N. Pontus Leander

The mind adapts and converts to its own purposes the obstacle to our acting.

—Marcus Aurelius, *Meditations* 5.20

Life will not be contained. . . . Life, uh, finds a way.”

—Jeff Goldblum, *Jurassic Park*

How far will people go to fulfill their needs? Since Zeigarnik (1927) observed that people show better recall for unfinished tasks, a history of research has considered how thwarted goals and unmet needs remain active in the mind, guiding the individual to find viable alternative means to fulfillment (e.g., Bargh et al., 2008; Leander & Chartrand, 2017; Masicampo & Baumeister, 2011; White, 1959). In this chapter, we consider how goal systems theory (Kruglanski et al., 2002) offers a framework to propose at least three ways people seek alternative means to fulfill their needs: shifts between means within a current goal domain, jumps to other domains, and leaps of faith into unexpected or new directions. We refer to this as the *shifts-jumps-leaps* (SJL) perspective of means substitution.

The network approach to self-regulation in goal systems theory highlights the importance of goal-means associations that provide the basis for shifts, jumps, and leaps. People’s goals and means form an associative *goal network*, organized in hierarchical *goal trees*, that are nested or embedded within different domains (Kruglanski et al., 2002). Domains are general categories of interconnected content; domains could differ by psychological content, as in the case of different social identities (Deaux, 1993), or emerge from real-world contexts, such as work life versus personal life (Hirschi et al., 2019; Shah & Kruglanski, 2008). Any single domain can host multiple, thematically related goal trees. Needs sit atop goal trees and domains, potentially connecting them (Kruglanski et al., 2002, 2021).

Research has mostly focused on shifts between means and (sub)goals within a single domain (cf. Kruglanski, Chernikova, et al., 2015). For example, an employee may try to switch jobs when the current job does not fulfill their achievement needs. However, such a basic means-shift may not suffice if, for instance, the person lacks key skills or affordances, or if they already switched jobs and nothing improved. Need fulfillment may require shifting to other domains, or realms of behavior, because different domains afford distinct goal-directed behaviors (Gibson, 1979; Kruglanski et al., 2014; Milyavska et al., 2009; Sheldon & Hilpert, 2012). Instead of pursuing achievement in the work domain, the person could jump to some alternative domain associated with achievement, such as sports, hobbies, or social engagement.

These *jumps*—shifts to alternative domains—are facilitated by an interconnected need, which acts as a “hub” that allows one to cognitively shift upward, to the level of the unfulfilled need, to gain access to other goal trees and domains (Kruglanski et al., 2002, 2021). Whereas basic means-shifts involve smaller moves, within a goal tree or domain, jumps involve grander moves across one or multiple interconnected points in the goal network.

Yet even jumps may not be fulfilling. Perhaps the person is not good at sports, or a new hobby is less fulfilling than anticipated, or one’s entire goal network has lost instrumentality. We theorize that people may engage in more drastic, enigmatic shifts, or *leaps*, which involve looking beyond the boundaries of their goal network in search of new means and affordances. A motivational readiness to leap could help to sustain motivation under uncertainty, and the search could incorporate one’s broader cognitive network as well as external inputs. For instance, a person with an unfulfilled need for achievement may surge toward novel pursuits that offer appealing alternative definitions of achievement (e.g., to “achieve” enlightenment), or they may be influenced by demagogues to pursue achievement through radical action and extremism (see Chapter 11 in this volume). Leaps may occur without planning and need not be logically coherent; the association between any given pursuit and need fulfillment could be merely heuristic, even illusory (e.g., Leander et al., 2017). Even if valid, the associative linkage may be indirect and implicit, requiring a leap of faith to act on it.

In this chapter, we reflect on the limited instrumentality of basic means-shifts to illustrate why jumps and leaps can be useful or necessary. We then outline the structures and processes relevant to the SJL perspective and provide examples of these mechanisms. We also generalize shifts, jumps, and leaps to a wide range of phenomena in psychology as seemingly small and innocuous changes in people’s self-regulation may exert grander and sprawling effects (e.g., Pothos & Busemeyer, 2022). We conclude with implications for goal systems theory and motivation science generally.

Basic Means-Shifts

Basic means-shifts allow people to change their approach to a goal when a current means is no longer instrumental or available (Kruglanski et al., 2002; Kruglanski, Chernikova, et al., 2015). Imagine a person who typically walks to work but has injured their foot. The change in circumstance might thwart the person's goal to get to work; alternatively, they could shift to another means of transportation, such as driving or public transport.

Means-shifts follow basic cognitive principles of associative networks (cf. Baronchelli et al., 2013). One principle is that the shift must occur via *associations*—that is, between means and goals that are cognitively interconnected, as well as cognitively available and accessible (Hobfoll, 1989; Kruglanski et al., 2002, 2014). An association could be direct but also indirect through a path of interconnected goals and means. Hence, when confronted with obstacles and constraints, people may shift between interconnected means and (sub)goals until they find one that works. Kelly and Updegraff (2017) observed that means-shifts are especially likely when goals are thwarted. In their study, college students with the goal of physical activity were asked to report multiple activities they would engage in to attain that goal, including current activities and alternatives. Self-reported engagement in any given alternative activity was higher when their current activity was unavailable, suggesting the generality (and flexibility) of means-shifts.

Another principle is that the total activation strength of an associative network generally remains a constant sum. A goal tree must sustain a constant level of motivational activation, roughly equivalent to the strength of the person's need (Kruglanski et al., 2002, 2021), which gets shared or subdivided across the various connections in the network. A network of associations between goals and means is analogous to a hydraulic system of pressure: If there are multiple means connected to a goal, any increase in association strength between one means and the goal requires a hydraulic weakening of association strengths between the other means associated with the goal (Shah & Kruglanski, 2008; see also Anderson, 1983). A consequence of this constant sum principle is that a network with a higher quantity of interconnected goals and means does not offer any more motivating potential than one with fewer interconnections.

Limits to Basic Means-Shifts

The instrumentality of basic means-shifts is constrained by the inherent shortcomings of making small moves within a single goal tree or domain. A means-shift is impossible if one has run out of available and accessible

alternatives. Even if one has multiple means available, the constant sum principle implies that having a larger means set weakens the activation strength of any single means in the set (*dilution effects*; Anderson, 1983; Bélanger et al., 2015; Kruglanski, Gelfand, et al. 2015; Kruglanski et al., 2002, 2011; Zhang et al., 2007). This may create efficiency losses in goal pursuit: In one experiment, participants were asked to list multiple means (vs. only one means) to pursue two otherwise independent work goals; they subsequently rated each goal and each listed means on various dimensions. The results indicated that, although listing a larger means set predicted higher commitment to the superordinate goal, it predicted lower commitment and engagement with the means themselves (Kruglanski et al., 2011).

Basic means-shifts are also constrained by the accessibility of other goals. Motivational conflicts arise when an alternative means has unwanted costs or consequences for other goals in the system. For example, a person may want to switch jobs, but hesitate, if it conflicts with the pursuit of desired social relationships. Shifting between means and subgoals also costs energy, effort, and other psychological or material resources that may sap motivation: A person may successfully shift to another job but have little energy left to pursue their original achievement goal after dealing with job applications, interviews, relocation, and adjustment to the new conditions. Furthermore, people prefer and prioritize means that facilitate multiple goals, to the exclusion of means that do not (*multifinality constraints effect*). In one experiment, Köpetz and colleagues (2011) asked participants around lunchtime whether they were hungry. The majority reported being hungry, so “getting lunch” was the focal goal. For the manipulation of multiple goals, participants were asked either about goals they had yet to attain (so multiple goals were activated, in addition to “getting lunch”) or about goals they had already attained (so only “getting lunch” was active). Participants were then asked to select one or multiple foods that were either easy or difficult to obtain. The results indicated that when multiple unattained goals were activated, participants limited their preferences to the most easily obtainable foods—raising questions about whether the lunch would be satisfying.

Basic means-shifts can also be unfulfilling (or ‘too little, too late’), if the broader goal tree or domain becomes contaminated by failure or conflict. People are averse to pursuits that have failed them in the past (Jones et al., 2009). Repeated failure in a goal tree or domain may lower its perceived instrumentality, as indicated by increased boredom, depletion, and/or disengagement (Ryan et al., 1995; Westgate & Wilson 2018; Wolff & Martarelli, 2020). In this vein, Park et al. (2007) observed that people disengage from their need to be perceived as effective, in an academic domain, after repeatedly suffering failures in that domain. Furthermore, even if a means’ instrumentality is fully restored,

self-evaluation concerns may lead some people—such as those with perfectionistic or narcissistic tendencies (e.g., Sedikides et al., 2019)—to avoid pursuits that remind them of past failures and thus threaten their self-perceptions.

Ultimately, basic means-shifts may be unfulfilling if the higher goal or domain lacks instrumentality. There could be constraints on the level of need fulfillment afforded by a situation (e.g., Lau & Wenzel, 2015; Radel et al., 2011) or changes in people's wants, needs, and standards (e.g., Bühler et al., 2019; Shah & Kruglanski, 2008; Wehner et al., 2021). Some people adopt externally imposed goals that do not fit their needs in the first place (Kuhl & Kazén, 1994).

Taken together, means-shifts may not suffice, raising the question of whether there are other fulfillment mechanisms. One could pause goal pursuit and wait for conditions to improve (Bargh et al., 2001; Shah et al., 2009). However, people may be unable or unwilling to wait (Kruglanski et al., 2014) and may prefer to shift to another domain or realm of behavior.

Jumping to Other Motivational Domains

People may search for alternative domains or realms of behavior in which to pursue fulfillment. Jumps are shifts between goal trees, often across domains. Rather than a simple or lateral means-shift within a goal tree or domain, a jump entails vertical movement, up to the level of the unfulfilled need that connects to other domains. In effect, needs act as associative hubs, or bridge nodes, that afford “jumping” across the goal network—from a current goal in one domain to another goal in a disconnected domain (Kruglanski et al., 2002, 2021). Figure 9.1 illustrates a jump (Panel B), in comparison to a basic means-shift (Panel A).

The idea of domain jumps was initially suggested in theorizing on frustration-aggression (Leander & Chartrand, 2017). This line of research showed that people jump to the psychological domain of aggressive behavior to maintain or restore efficacy or control when a focal domain of achievement is thwarted. After goal frustration, aggressive impulses often get displaced onto targets that had no role in the original frustration (Berkowitz, 1989; Dollard et al., 1939). In five experiments, Leander and Chartrand (2017) observed that such displaced aggression operated much like any other means-shift: In response to thwarted goals, having a means to engage in displaced aggression helped to maintain or restore self-efficacy beliefs. The displaced aggression was attenuated among participants who were experimentally presented with alternative means, such as a second opportunity for goal pursuit in the thwarted goal domain, or an opportunity to have a greater impact by helping someone. The priority was to (re-)assert one's efficacy, regardless of whether it meant jumping between the

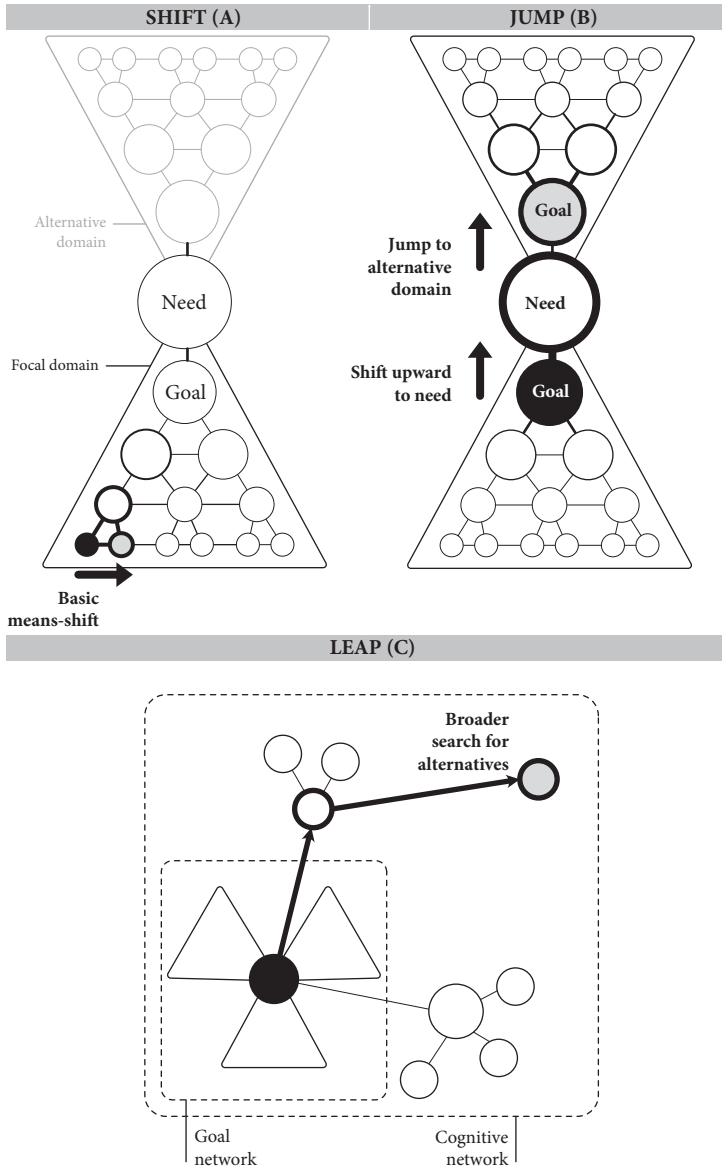


Figure 9.1 A shifts–jumps–leaps perspective of means substitution. In Panel A (Shift) and Panel B (Jump), the interconnected nodes represent goal trees (goal–means hierarchies), nested in two different domains associated with the same need. In Panel C (Leap), a need is associated with three domains, all nested in a goal network, which is nested in a cognitive network. The nodes in the cognitive network represent content that is associated with the need but not part of the goal network.

domains of achievement striving, aggression, or helping others (see also Leander et al., 2020).

A history of research showed that people pursue multiple goals, across life domains, to maximize their opportunities for need fulfillment (Hennecke & Freund, 2017; Hofer & Peetsma, 2005; Kruglanski et al., 2002; Milyavska et al., 2009; Shah & Kruglanski 2008; Sheldon & Hilpert, 2012; Sun & Frese, 2013). Our theorizing on jumps is rooted in the idea that any given want or need can be served by different goals from different domains (work, school, relationships, identities, groups, value systems, etc.), and that any given domain will contain goals befitting the constraints and affordances of that domain (Kruglanski et al., 2014). The higher need connects the disparate domains and allows for jumps between them (e.g., Baronchelli et al., 2013; Bullmore & Sporns, 2009; Watts & Strogatz, 1998). We will discuss structural and process considerations and illustrate how theorizing on domain jumps increases the generalizability of goal systems theory.

Shifting Upward, to the Need Level

Jumps operate by the same process as basic means-shifts, just at a higher hierarchical level (i.e., at the superordinate need level rather than the subordinate goal level). Jumps should otherwise abide by the same cognitive network principles as basic means-shifts, such as association strength and constant sum. With regard to associations, a jump requires that instrumental, alternative domains are connected to the same need. For example, a person needing to relax might set a goal to take a vacation. Within the travel domain, they could shift between specific goals (beach vs. city vacation) and means of transportation (air vs. ground). Yet, these shifts all occur within the domain of travel. If travel was obstructed—as during the COVID-19 pandemic—need fulfillment may necessitate a shift “upward,” out of the travel domain, to find alternative domains associated with relaxation (e.g., outdoor activities or in-home entertainment). Although the new goals, means, and behaviors are unrelated to travel, they serve the same need.

In line with the constant sum principle, the association strength between a domain and a need should weaken when that domain is no longer sufficiently instrumental to the fulfillment of the need. In turn, other domains associated with that need should hydraulically gain strength. If needs operate as hubs, people may jump from a now weakened domain (i.e., former goal or means) to a new goal or means nested in a domain that gained strength.

Although this process is seen from a top-down, need-driven perspective of alternative goals in other domains, jumps could also occur from a bottom-up activation of alternative goal trees associated with a multifinal means, such as

money, which serves multiple goals across domains (e.g., Mandel et al., 2017; Richins, 2017). Hence, the activation of certain means or goals can increase the accessibility of alternative domains. In any case, this jump to another goal tree in another domain is driven by the weakening of goals in one domain and the strengthening of goals in another.

Jumps implicate additional principles that may cause meaningful, albeit secondary, psychological changes. With regard to associative networks (e.g., Baronchelli et al., 2013), jumps can substantially alter the focal starting point for *spreading activation* (e.g., Collins & Loftus, 1975). That is, a jump to a new focal goal, elsewhere in the goal network, may be accompanied by the activation or priming of qualitatively distinct content associated with the new domain. If a goal system is analogous to a cognitive-motivational “map” of interconnected constructs, shifting to a new goal or domain would involve a repositioning of focal attention to another location on the map. Much as a change of environments could prime goals and means (Kruglanski, Chernikova, et al., 2015; Shah & Kruglanski, 2000), changes in one’s psychological “environment” would prime cognitive constructs proximally associated with the new focal goal and the domain in which it is nested. Hence, jumping across the goal network may precipitate broad changes in one’s psychological states, self-concepts, and identities and include a reprioritization of values that alters the trajectory of future shifts and jumps. From a complex systems perspective, local changes lead to chaotic, turbulent, and non-linear effects in the system at large (Fieguth, 2021; Jordan et al., 2015; Pothos & Busemeyer, 2022; Shah & Kruglanski, 2008). In that way, a change in goals could change the person.

Examples of Domain Jumps

The idea that jumps are regulated by a common, superordinate need could explain the seemingly dissociated or displaced responses to threat and frustration that pervade the psychological literature. Toward this end, recent theorizing on *frustration–affirmation* applied goal systems theory to integrate multiple lines of research that examine shifts between content domains to address a psychological need, including frustration–aggression and self-affirmation (Leander et al., 2020).

The gist is that some domains may be socially acquired, whereas other domains may be ancient and biologically inherited. For example, the need for achievement can be pursued across one’s professional, personal, or social life domain. Some definitions of *achievement* are socially constructed and can vary by the norms and values of one’s social network (e.g., Kruglanski, Gelfand, et al., 2015). In an experiment conducted during the 2016 European migrant crisis,

Dutch adults who were embedded in a social network of volunteers did not show aggression in response to a work-related failure; rather, they reported an increased willingness to volunteer in refugee support activities (cf. Leander et al., 2020). Among these participants, the volunteering domain was an alternative means through which achievement could be pursued.

With regard to a human tendency to resort to violence, people might prefer prosocial domains but ultimately prioritize the fulfillment of the superordinate need. In certain cultures, social norms might even reinforce the use of violence, such as when men alternate between the social identity domains of being a worker and a warrior. In one study, male American handgun owners reported their expectation that they would lose their job in the next 12 months and reported their agreement with proviolent values within masculinity ideology (e.g., “A man should not be afraid to fight”). Participants then completed a shooting simulation task in which they were instructed to quickly “shoot” armed targets and not shoot unarmed targets. Expectations of job loss interacted with masculinity ideology to predict a greater proportion of shooting errors against unarmed targets (Leander et al., 2020). To them, violence was a socially normative, alternative domain to assert masculine dominance.

Altogether, people may jump to seemingly disconnected domains, which could explain violent as well as beneficent responses to frustration. Hence, domain jumps could explain how seemingly (self-)destructive tendencies could reflect active and ongoing self-regulation (Kopetz & Orehek, 2015; see Chapter 2 in this volume).

Limits to Domain Jumps

The shortcomings of domain jumps can be similar to basic means-shifts, but their consequences may be more severe. People expend cognitive resources when they change domains (Gollwitzer et al., 1990; Gollwitzer & Oettingen, 2016; Gollwitzer & Sheeran, 2006; Louro et al., 2007; Sun & Frese, 2013), and domain jumps could be uniquely depleting (e.g., Kruglanski, Chernikova, et al. 2015; Kruglanski, Gelfand, et al. 2015; Kruglanski et al., 2011; Shah & Kruglanski, 2002). The switching costs increase when a jump prompts secondary psychological changes. There can be efficiency losses if the new goal requires secondary psychological changes to take effect before the goal can be effectively pursued. Jumping domains could result in a costly period of reduced effectiveness in the new domain—or a failure to launch in the first place and getting stuck in a rut, drained of resources.

Jumps may also be susceptible to motivational conflict at multiple levels—between specific means and goals, or between the broader domains in which

goal trees are nested. Although the new domain may facilitate the fulfillment of a focal need, the breadth of content nested in any new domain introduces multiple potential points of conflict with other goals and needs, especially if one cannot construct a coherent narrative to reconcile the conflict(s). When a broader domain becomes associated with failure, it may contaminate the content within that domain. People might have certain qualitative preferences that limit the domains they want to jump to—norms, standards, identities, and self-images. Perhaps people intuitively anticipate the secondary changes that correspond with jumps and thus only want to make smaller jumps, to domains that sustain the activation of a preferred self-concept. In other words, there may be a preferred hierarchy of domains people rotate between (Shah et al., 2009), above and beyond any goals–means hierarchies within each domain. Such domain-level hierarchies could prevent people from jumping to more optimal goals that are nested in undesirable domains.

Ultimately, domains are abstract, general categories, so they may be limited in number; and it may be difficult to add new domains to a current goal network. If people can only jump to domains that are cognitively available and accessible, this may lead to the tyranny of the familiar, where people, for instance, keep going back and forth between old jobs or relationships, chasing ghosts of the past. If domains are cognitive categories that can be mentally represented, people may intuitively realize when they should jump and experience failures at multiple levels when they hesitate, or inhibit themselves, from jumping. Perhaps there is yet another mechanism that people may resort to when neither basic means-shifts nor domain jumps suffice.

Leaping Beyond the Current Goal Network

When an entire goal network lacks instrumentality, people may search for alternatives via external inputs or their broader cognitive network. A *leap* is a process in which one identifies a potential goal or means outside one's goal network and surges toward it.

A defining feature of leaps is that people do not need to have prior experience with the target goal or means; its instrumentality can be merely assumed. With shifts or jumps, people act upon content that is already in their goal network; with leaps, people may shift toward content that is unstructured and based on guesswork—requiring people to trust their intuitions and hope for the best. Therefore, leaps can seem illogical; people can leap to dubious alternatives that are only intuitively or indirectly associated with need fulfillment. For example, a person who lacks real-world control may seek psychological control through belief in a higher power (Landau et al., 2015), or a person unable to achieve

significance through normative channels can surge toward extremism (see Chapter 11 in this volume).

Although a leap is purely conjectural, goal systems theory provides a basis to consider its mechanisms—which might include a broadening of attentional scope or openness to unorthodox means, spontaneous creation of new goal-means linkages and network structures, or surging to novel ideas and radical action.

A Broad Search for New Affordances

People who are motivationally ready for a leap may be more influenced by incidental inputs, be they spontaneous thoughts or situational cues. According to ancient history, Archimedes was obstructed in his goal to measure the volume of irregularly shaped objects. Later, when he stepped into a bath, he noticed the water level rise and had the sudden insight that the volume of objects could be measured by their displacement of liquid. (Archimedes then shouted “Eureka!” and ran naked in the streets, eager to share the discovery.) The events leading up to his eureka moment describe the prototypical conditions for a leap.

A leap can also be triggered by inputs from one’s cognitive network (see Figure 9.1, Panel C). This requires a structural assumption that a goal network is itself nested within a wider cognitive network that contains other knowledge or constructs not currently relevant to the goal network (cf. Baronchelli et al., 2013; Kruglanski et al., 2002). The cognitive network could contain, for instance, knowledge about other types of goals and means that are not part of one’s current goal network. The distinction between motivational and non-motivational cognitive content is reminiscent of Devine’s (1989) distinction between stereotype knowledge and stereotype application—that is, people can learn about goals and means through cultural learning, but this does not necessarily mean that they incorporate them all into their goal network. A goal network is the part of a cognitive network perceived to be instrumental to need fulfillment; the rest of the cognitive network need not inform one’s pursuits but could be available for later use.

The process of leaps shares some similarities with basic means-shifts and domain jumps: When an entire goal network lacks instrumentality to fulfill a need, the activation strength of the entire goal network weakens. Following the constant sum principle, there must be increased activation elsewhere. A leap may occur when an unfulfilled need causes leakage of activation to constructs outside the goal network. The content that is activated in the broader cognitive network might only be intuitively or indirectly associated with the need. Hence, motivation could surge toward novel pursuits.

Regardless of whether or not a leap is subjectively experienced as an insight, a realization, a moment of clarity, or a new calling, a leap may be marked by a sea change in the direction or quality of one's attention and efforts and characterized by a heightened expectancy of need fulfillment. Any expectations of need fulfillment could be mere assumptions, derived from wishful thinking or inferred from a lifetime of implicit learning about the instrumentality of related courses of action (e.g., Lewicki, 1986). Hence, the expectancy need not be logical; it could be associative or heuristic—that is, one intuitively believes it is instrumental but cannot articulate why. Correlational studies suggest that people are apt to distinguish when their expectancies of goal attainment are mainly based on intuitive faith, rather than logic and reason (Leander, 2022).

Yet, a leap is not random: It still follows associative cognitive network principles. The cognitive network already provides an associative link between the need and target of the leap; the linkage may be direct enough to afford a rather logical leap. However, the linkage may also be indirect—connected to the need only via a daisy chain of linked cognitive constructs. The associative pathway may not even be salient to the individual, and it is up to them to retrace the chain of associations that leads back to the need. In other words, it may be a leap of faith. Through a process of spreading activation, the leap to the new focal position, in the cognitive network, may inevitably prime the very associative pathways that initially led to the leap; alternatively, the sprawl of spreading activation that begins upon psychological arrival at the new focal position may reveal alternative pathways that trace back to the need. Hence, the individual need not follow the same pathway back to the need that initially triggered the leap, if other—more instrumental—pathways become accessible and discoverable (e.g., Pothos & Busemeyer, 2022).

A leap can occur independently of any motivational conflicts. The nascence of the new pursuit might correspond with a lack of awareness that conflicts exist; the individual might also ignore conflicts pertaining to a goal network that has lost its instrumentality. Leaps might even be propelled when a goal conflict increases the perceived instrumentality of the new pursuit (Kopetz et al., 2019).

Accordingly, leaps can involve disengagement from a current goal network or other constraint. The disengagement could be necessary or optional, partial or absolute, gradual or abrupt. Whereas a logical leap could be planned, to minimize risks to one's goal network, a leap of faith may require acting first and learning the consequences later. The disengagement may be intentional—it could take a leap of faith to shed an unfulfilling relationship, career, or lifestyle, to create room for new pursuits. The disengagement could be cognitive as well as motivational: A relaxation of cognitive constraints may be required if one is to engage in the intuitive thinking involved in creative insight (Hodgkinson et al., 2008). Even a quantum leap in scientific reasoning can require letting go of

existing paradigms of thought (Kuhn, 1970; Pothos & Busemeyer, 2022). Yet, the perceived risks of disengagement could be why people hesitate or inhibit themselves from leaping.

Examples of Leaps

Leaps may already be documented in psychological research. We first consider mortality salience. The need to survive will inevitably be thwarted by death unless one achieves a form of immortality. Means-shifts and domain jumps are insufficient because there are no realistic means to immortality (cf. Jonas et al., 2014). People are nevertheless motivated to try and are thus receptive to a range of compensatory alternatives. One alternative is magical thinking and the seeking of symbolic immortality. To overcome death anxiety, religions foster belief in reincarnation or an afterlife (McClelland, 2010); people also seek symbolic immortality by achieving social significance—that is, to “leave a legacy” that can live on when they die (Sligte et al., 2013). Alternatively, people could increase their identification with an enduring in-group or cultural worldview (Burke et al., 2010). Any uncertainty about the veracity of such beliefs are not a flaw but a feature—magical beliefs are hard to disprove via logic.

People show similar responses to control loss: often compensating for a lack of real-world control by seeking psychological control (Landau et al., 2015). Control deprivation increases the perception of patterns in random noise (Whitson & Galinski, 2008). A tendency to impose meaningful patterns onto disconnected stimuli can be useful, but it can also facilitate beliefs in supernatural forces and conspiracies (Forgas & Baumeister, 2019). In either case, a leap could involve paradigm shifts in the mind that prioritize control over reality.

Leaps can be risky and (self-)destructive. For example, significance quest theory considers how ordinary people may join extremist causes (Kruglanski, Gelfand, et al., 2015): If a person suffers deep humiliation, lost loved ones, or terminal illness, no goals in their current goal network are sufficient. Whether through introspection or external influence, they may “leap” to radical pursuits not previously considered or imagined. Some leaps may be so life-altering that the person cannot return to their original point of departure. Some leaps can be life-ending.

A person ready to leap could also be susceptible to adverse influence. They could be persuaded to adopt ill-fitting goals, either by demagogues who spread utopian ideals or by everyday marketing of products. Consumer psychology shows how advertisers seek to create a goal-means association between their product and the fulfillment of commonly unmet needs, to persuade potential consumers to buy expensive products or make risky investments (Mandel et al.,

2017). An ad may show an expensive smartphone being used by a successful professional (implying achievement) or by someone surrounded by family and friends (implying affiliation). In the 1920s, the “torches of freedom” marketing campaign sought to persuade women to smoke by associating cigarettes with symbols of power and control (Amos & Haglund, 2000). Advertisers of the Bushmaster AR-15 semiautomatic rifle sought to associate their product with masculinity (“consider your man card reissued”).

A motivational readiness for leaps may nevertheless be essential for need fulfillment, by facilitating the perception of hidden opportunities, or relaxing constraints on thought and behavior in fleeting moments of opportunity (Shah et al., 2009). Leaps of faith may even be the basis for self-fulfilling prophecies: William James (1897) argued that even scientists must sometimes take a leap of faith—committing to a hypothesis and pursuing it relentlessly, over time, just to create the conditions in which they can find out if their hypotheses are true. Leaps born from desperation can turn out to be masterstrokes.

Toward an SJL Perspective on Adaptive Goal Pursuit

As we celebrate 20 years of goal systems theory, we consider how some speculation could expand the theory’s scope and explanatory power. Doing so requires a deliberate effort to push the tenets of the theory to their most extreme conclusions (McGuire, 1997). One must also consider seemingly irrelevant phenomena that fit within the scope of the theory, even if they are not explicitly articulated by its basic principles. For those who want to realize the full potential of the theory, it may require a willingness to take intellectual risks—perhaps even a leap of faith—to jot down some ideas and subject them to scrutiny.

In this spirit, we propose three variants of means substitution that may occur in pursuit of need fulfillment and their different structures, processes, and outputs. A basic means-shift entails shifting between means and subgoals within a current goal tree. However, the instrumentality of basic means-shifts may be limited, and people could, instead, shift “upward,” to the level of the unfulfilled need, to jump to some other goal, in another domain, that serves the same need. Domain jumps may be characterized by secondary psychological changes that either facilitate motivational readiness for the new goal or are incidental consequences of spreading activation from the new focal position in one’s cognitive network.

A leap involves searching for means beyond the current goal network. Theorizing about leaps opens new process considerations, such as looking to one’s broader cognitive network for ideas and shedding constraints. A motivational readiness to leap could facilitate openness to novel inputs and the

detection of new affordances (Gibson, 1979) but also susceptibility to magical thinking, adverse influence, and temptations. Leaps of faith may be especially risky, but their self-regulatory potential is ripe for exploration.

Theoretical Articulation May Reveal New Directions for Goal Systems Theory

Our conjecture on these variants of means substitution can be useful for new hypothesis generation. Just as different goals and means compete with and/or inhibit one another (Shah et al., 2002), so too might there be interdomain competition and inhibition. Goal system dynamics could occur at multiple levels, especially if goals and means are nested within goal trees that are themselves nested in different domains. If a focal domain loses instrumentality and no longer exerts inhibitory pressures, domains that were previously suppressed or inhibited may become hyper-accessible and reveal their goal trees.

There can be individual differences in skill, ability, or preference for each variant of means substitution. Some people might deftly shift between means and (sub)goals but lack the wisdom and foresight to jump domains. Seemingly “lucky” people may leap with uncanny success because their intuitive expectancies lead them to be at the right place at the right time. A tendency for clever shifts, wise jumps, and prescient leaps can have qualitatively distinct moderators, including information processing factors related to the structure of cognitive networks (Baronchelli et al., 2013), cognitive complexity (Scott, 1962), intuitive ability (Benedek et al., 2012), or situational differences in psychological construal level (e.g., abstract vs. concrete; Liberman & Trope, 2014; Trope & Liberman, 2011).

Although shifts, jumps, and leaps have been presented in a sequential order here, they need not occur in any order. Situational factors, such as narrow windows of opportunity (Shah et al., 2009) or exposure to new information, may prompt an immediate jump or leap. A jump or leap could be preferred when it is multifinal: After goal failure in one domain, jumping domains could help to fulfill the need in a different way, while also shielding the self from negative self-evaluations in the failed domain (Linville, 1985; Tesser, 1988). Even if one is making sufficient progress at a focal goal, one could be pulled to jump or leap anyway when one discovers that another domain has fewer constraints or serves additional needs, such as autonomy. People are phenomenologically aware of when they do not feel free (e.g., Bartholomew et al., 2010; Radel et al., 2011); jumps and leaps may feel liberating when they involve disengaging from self-defeating goals and constraints on one’s freedoms.

With regard to general implications, this chapter treats constraint as an essential starting point for change in a goal network, which is reminiscent of

classic social cognitive notions of driving forces and retraining forces. Wright and Brehm's (1989) energization theory proposes that a minimal level of goal difficulty is required to motivate effort; hence, one way to motivate goal pursuit is to impose constraints and obstacles to its attainment (e.g., Fishbach et al., 2010; Leander et al., 2014; Zhang & Fishbach, 2010). The notion that absolute freedom is a starting point could be inherent to Western thinking (cf. Rosich, 2020). Absolute freedom could be aversive (Fromm, 1941); people might prefer operating within the constraints of their current goal network when it provides security or certainty. Nevertheless, to circumvent or shed constraints, the development of means-substitution responses can form a basis for personal growth: People who learn to jump or leap may develop rich motivational structures that facilitate need fulfillment.

To conclude, to the extent that needs find a way to their fulfillment, goal systems theory offers an array of structures and processes to make it possible. After 20 years of development and application, the theory has matured enough to become a platform for conjecture. The concepts proposed here are hardly authoritative or exhaustive; whether there is just one mechanism of means substitution, three distinct variants, or many variants is an empirical question. What matters is to entertain these hypotheticals, to push the theory forward to reveal its ultimate potential—or its final limits.

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