

## Chapter 5

# Motivational Theory of Lifespan Development

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In this chapter, we outline the motivational theory of lifespan development, (Heckhausen, Wrosch, & Schulz, 2010), introduce the specific propositions of the theory, and elaborate how these propositions apply to individuals' development and functioning in the life domains of work and career.

## MOTIVATIONAL THEORY OF LIFESPAN DEVELOPMENT: A BRIEF OVERVIEW

### Historical Development and Conceptual Uniqueness

The motivational theory of lifespan development emerged from early conceptual roots in the lifespan theory of control (Heckhausen & Schulz, 1993, 1995; Schulz & Heckhausen, 1996), which sought to clarify how individuals actively contribute to their own development across the lifespan. A number of central tenets of the motivational theory of lifespan development were formed through this earlier work, the most foundational of which is that an individual's motivational system is focused on maximizing her or his primary control capacity. With this cornerstone, the theory separated motivational strategies along primary-secondary and selective-compensatory dimensions. The next step in theory development occurred by identifying heuristics that can guide individuals to choose the right goals at the right time in life (OPS-model; Optimization in Primary and Secondary control, Heckhausen & Schulz, 1993). In a further conceptual elaboration, the theory adopted the structure of action-phases in cycles of goal pursuit that cover phases of goal selection, goal engagement, goal disengagement, and re-engagement with

adjusted or new goals. Each action phase has its own adaptive mindset and set of control strategies (action-phase model of developmental regulation, Heckhausen, 1999). Empirical work over the next decade led to further theoretical refinement, the culmination of which was presented as the motivational theory of lifespan development (Heckhausen et al., 2010).

In the years since, similarities and differences between the motivational theory of lifespan development and other theories of lifespan development have gained clarity (for review see Haase, Heckhausen, & Wrosch, 2012). Although a thorough review is beyond the scope of this chapter, we will briefly highlight some differences between the motivational theory of lifespan development and the other motivational theories covered in the current book; the model of selection, optimization, and compensation (Baltes & Baltes, 1990; for review and application to the work domain, see Chapter 4 of this book), and socioemotional selectivity theory (Carstensen, Isaacowitz, & Charles, 1999; for review and application to the work domain, see Chapter 6 of this book). The most basic distinction among the three theories lies in the major purpose that the system of developmental regulation serves; motivational theory of lifespan development sees maximizing primary control as the ultimate purpose of regulation; the model of selection, optimization, and compensation sees regulation as aimed at maximizing the gain-to-loss ratio in development; and the socioemotional selectivity theory proposes that an increasing focus on emotional well-being drives changes in social preferences between younger and older adults.

Further differences emerge when detailing the motivational regulation processes, and their prominence and organization across the lifespan. The motivational theory of lifespan development is unique in that it details meta-regulatory strategies that individuals employ to fit their goal engagement and goal disengagement strategies to present and anticipated opportunities, both within and across domains of life. The motivational theory of lifespan development also differs in the influence that it attests to time, focusing on how control capacity and the opportunities and constraints for specific goal pursuits change across an individual's lifespan.

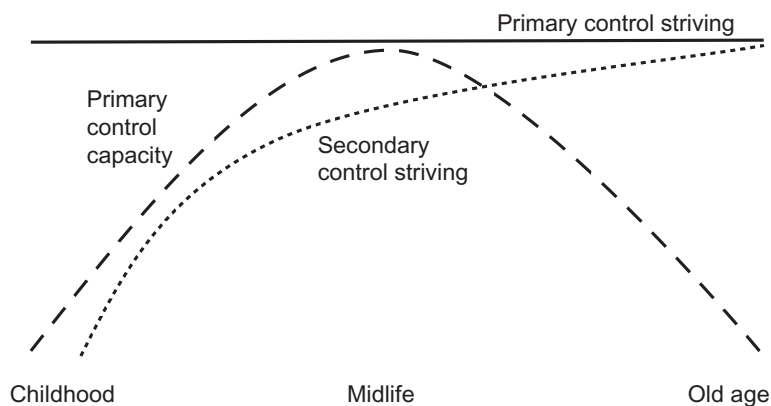
## Central Propositions

The motivational theory of lifespan development proposes that primary control provides adaptive benefits for an individual's survival, reproduction, and thriving of offspring. Because of these evolutionary advantages, motivational mechanisms have evolved that drive individuals to maximize their control over their own development and their immediate social and material ecology (primary control) (Heckhausen, 2000; Heckhausen et al., 2010; Heckhausen & Schulz, 1995, 1999). Primary control striving promotes individuals' development by allowing them to progress toward and attain goals, overcome obstacles, and maintain a positive self-concept (see, e.g., Converse, Pathak,

Depaul-Haddock, Gotlib, & Merbedone, 2012; Gitlin, Hauck, Winter, Dennis, & Schulz, 2006; Haase, Heckhausen, & Köeller, 2008; Seibert, Crant, & Kraimer, 1999; Shane & Heckhausen, 2016a).

While individuals' motivation to maximize their primary control remains a stable force throughout the lifespan (Heckhausen, 1997), an individual's capacity to exert primary control (i.e., primary control capacity) is constrained by biological and societal factors (Heckhausen, 1999). The result is that, as individuals progress through the lifespan, their primary control *striving* remains high and stable, but their primary control *capacity* rises through the first half of life before peaking in midlife and then declining in late life (see Fig. 5.1). With age, individuals gain greater self-regulatory skills that allow them to be more efficient and effective in the choice and pursuit of, and disengagement from their goals (Heckhausen, 1997; Heckhausen & Schulz, 1995; Wrosch, Heckhausen, & Lachman, 2000; Wrosch, Scheier, Miller, Schulz, & Carver, 2003). This motivational self-regulation is based on action- and self-directed secondary control strategies that complement the rise in primary control capacity through midlife (Hall, Perry, Ruthig, Hladkyj, & Chipperfield, 2006; Poulin & Heckhausen, 2007) and help offset the loss of primary control capacity through late adulthood (McQuillen, Licht, & Licht, 2003; Schulz & Heckhausen, 1996).

The disconnect between the desire for and capacity to control one's development forces individuals to develop motivational strategies that allow them to make the most of their changing opportunities across the lifespan. These motivational strategies are broadly distinguished along two dimensions, primary–secondary and selection–compensation (Heckhausen & Schulz, 1993).



**FIGURE 5.1** Hypothetical lifespan trajectories for primary control capacity and primary and secondary control striving. *From Developmental Regulation in Adulthood: Age-Normative and Sociostructural Constraints as Adaptive Challenges, by Heckhausen, J. (1999). Developmental regulation in adulthood: Age-normative and sociostructural constraints as adaptive challenges. Cambridge, England: Cambridge University Press. Figure 3.1, p. 72. Reprinted with permission. Copyright 1999 by Cambridge University Press.*

This  $2 \times 2$  framework comprises four groups of motivational strategies; (1) *selective primary control strategies*, (2) *selective secondary control strategies*, (3) *compensatory primary control strategies*, and (4) *compensatory secondary control strategies*.

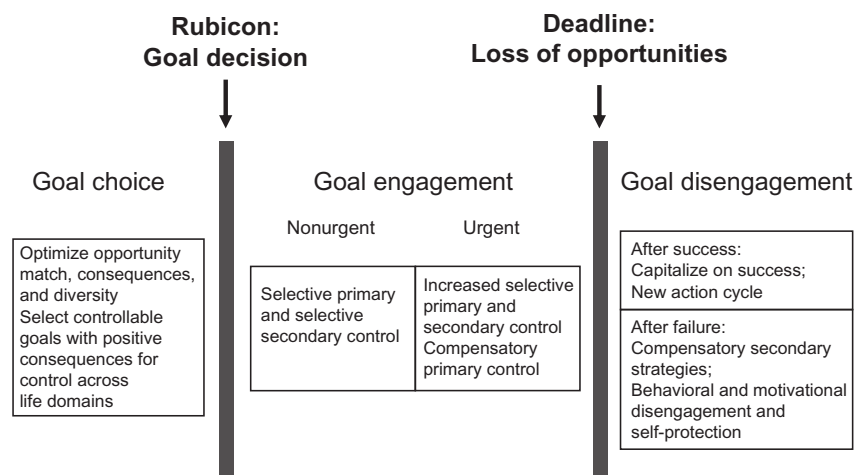
Selective primary, selective secondary, and compensatory primary control strategies facilitate goal engagement processes (Heckhausen et al., 2010). *Selective primary control strategies* include direct investment of thought and behavioral effort toward the attainment of a pursued goal. Not all goals are easily accomplished, however, and it is in response to or anticipation of these difficulties where selective secondary and compensatory primary control strategies become implemented. *Selective secondary control strategies* include inward-directed volitional strategies such as increasing the perceived value of the goal and one's own ability to reach the goal, as well as strategies to avoid or ignore distractions. These strategies enable an individual to fully commit to goal pursuits. They become increasingly important when individuals are pursuing long-term goals with uncertain outcomes (Poulin & Heckhausen, 2007). *Compensatory primary control strategies* include finding alternative ways of attaining a goal, and recruiting help from others or other external resources. These strategies become most prominent when an individual's initial route toward goal attainment becomes blocked, or the goal is impossible to attain on one's own (Heckhausen & Schulz, 1993). Selective primary, selective secondary, and compensatory primary control strategies are ideally orchestrated in a way that enables individuals to successfully pursue and attain their goals in the most efficient and effective manner.

*Compensatory secondary control strategies* help individuals to disengage from a goal (Heckhausen et al., 2010). These include self-protective, goal adjustment, and distancing thoughts that facilitate the discrete switch from goal engagement to goal disengagement and reengagement with a new goal pursuit. Ideally, these strategies are enacted in a way that minimizes any threat to one's self-esteem stemming from disengaging from a pursued goal. For example, downward social comparisons (Bauer, Wrosch, & Jobin, 2008; Frieswijk, Buunk, Steverink, & Slaets, 2004), devaluing the disengaged-from goal (Rothermund & Brandstädter, 2003; Shane & Heckhausen, 2016a), and enacting self-protective causal attributions that appraise failure to attain the goal as something that was outside of one's control (Wrosch, Bauer, Miller, & Lupien, 2007) allow individuals to disengage from a goal while protecting their self-concept. Goal disengagement is generally most adaptive when it is done quickly and decisively, the likelihood of which is increased when individuals have an alternative and attractive substitute goal to pursue (Aspinwall & Richter, 1999). Indeed, the primary adaptive advantage of disengagement is that it allows the individual to free up motivational resources that can then be redirected toward new goal pursuits (Wrosch, Scheier, Carver, & Schulz, 2003).

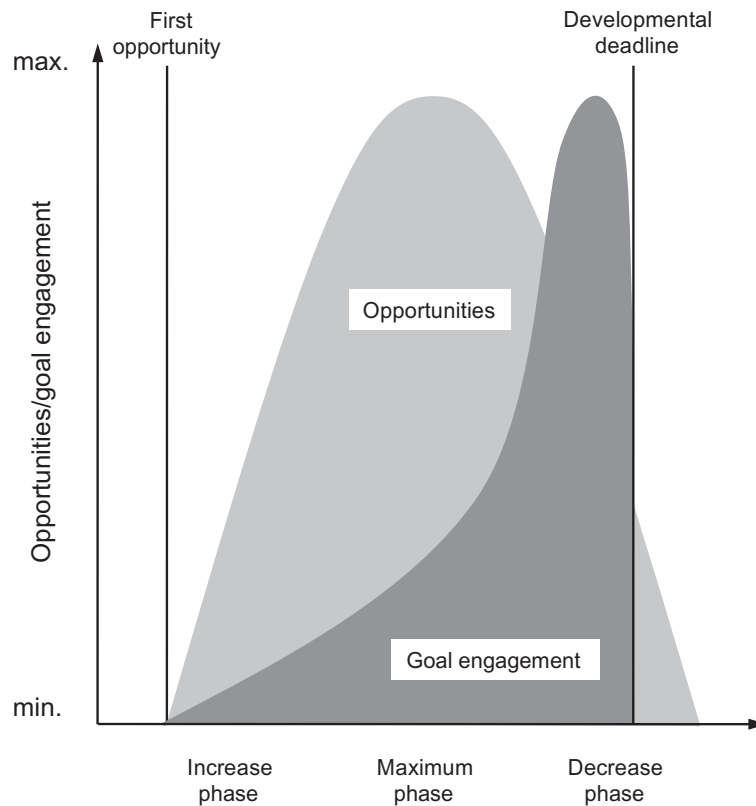
Individuals' motivational strategies are coordinated into cycles of goal engagement and goal disengagement. How goal cycles themselves are

organized is outlined by the action-phase model of developmental regulation (Heckhausen, 1999; see Figs. 5.2 and 5.3), which builds and expands on the rubicon model of action phases (Heckhausen, 1991; Heckhausen & Gollwitzer, 1987). In the goal choice phase, individuals weigh the opportunities for and possible consequences of potential goal pursuits to choose the most appropriate goal. Once individuals decide on a goal, they cross into the goal engagement phase, wherein selective primary and selective secondary control strategies become enacted. Within the goal engagement phase, a progression from non-urgent to urgent goal striving unfolds as individuals approach the developmental deadline and opportunities to attain the goal diminish. During this progression, selective primary and secondary control strategy use is intensified, and compensatory primary control strategies are implemented. If the goal is attained, individuals capitalize and build on this success and a new goal cycle is begun. If the goal is not attained, compensatory secondary control strategies are enacted to enable the individual to disengage from the goal.

The adaptiveness of goal disengagement and of goal engagement can only be judged within the opportunity-context of the goal pursuit (Haase et al., 2012). This is the congruence principle of the MTD (Heckhausen et al., 2010), which is one of three heuristics of adaptive and optimized goal choice. The other two optimization heuristics involve how individuals orchestrate their motivational commitment across goal pursuits and life domains. This includes minimizing the negative and maximizing the positive within- and across-domain consequences a goal pursuit has, and ensuring that individuals are actively pursuing goals across central domains of life



**FIGURE 5.2** Action-phase model of developmental regulation. *Modified from* Developmental Regulation in Adulthood: Age-Normative and Sociostructural Constraints as Adaptive Challenges, by Heckhausen, J. (1999). *Developmental regulation in adulthood: Age-normative and sociostructural constraints as adaptive challenges*. Cambridge, England: Cambridge University Press. Fig. 5.1, p. 114. Reprinted with permission. Copyright 1999 by Cambridge University Press.



**FIGURE 5.3** Age-graded opportunity structure and goal engagement for developmental goals. *From Motivational Psychology of Human Development: Developing Motivation and Motivating Development, by Heckhausen, J. (2000). Evolutionary perspectives on human motivation. American Behavioral Scientist, 43(6), 1015–1029. Fig. 5.2, p. 215. Reprinted with permission. Copyright 2000 by Elsevier.*

(e.g., work, family, etc.). Individuals are capable of coordinating goal pursuits in multiple domains (e.g., work and family) and this capability has adaptive benefits across central domains of life (Knecht & Freund, 2016; Shane & Heckhausen, 2016b), adjusting their goal pursuits to attain balance across goal domains (Kumashiro, Rusbult, & Finkel, 2008), and striving to and benefiting from minimizing goal conflicts (Riediger & Freund, 2004; Riediger, Freund, & Baltes, 2005; Shah, Friedman, & Kruglanski, 2002) in part through goal prioritization (Tomasik & Freund, 2015).

## APPLICATION OF THE MOTIVATIONAL THEORY OF LIFESPAN DEVELOPMENT LIFESPAN TO WORK

### Developmental Goals Addressing Work-Life and Career

Developmental goals are desired end states that structure and organize an individual's efforts to influence her/his own development and life course (Heckhausen, 1997, 1999). Developmental goals are present in all domains

of life, one of the most prominent being work. Work-related goals encompass much of adulthood, from entering a career and securing stable employment as a hallmark of becoming an adult, through strivings to reach one's potential maximum status and position in one's career in midlife, to pondering the timing of one's disengagement and retirement, and replacing work engagement with other activities during retirement.

Work-related developmental goals are structured by individual, societal, and organizational factors that define when and how steeply opportunities for goal attainment rise and fall (Heckhausen, Shane, & Kanfer, 2017). How individuals recognize developmental goal opportunities and accordingly organize their motivational strivings is outlined by the action-phase model of developmental regulation (Heckhausen, 1999; Heckhausen et al., 2010).

During the initial goal-choice phase, individuals (should) employ the heuristics of optimized goal choice discussed previously to select goals that offer the greatest potential for attainment and maximization of individuals' primary control potential, given the present and anticipated opportunities and constraints. For example, an individual deciding which career to pursue may weigh his or her own capabilities, qualifications, as well as his or her values and interests, and try and find a match with the currently available job opportunities to find an appropriate path forward.

After selecting a goal (e.g., find a job to enter a career in real estate), individuals enter the beginning, nonurgent phase of goal engagement. The individual will then use selective primary control strategies by investing time and effort into finding and securing employment. Selective secondary control strategies (e.g., enhanced perceived value and control of the goal) help sustain individual's motivational focus and investment directed toward attaining the goal. For example, an individual's applications to local real estate offices may be rejected, she or he may encounter delays in attaining the necessary licensure, or she or he may experience difficulties in other areas of life that compromise her or his ability to focus on the job search process. The threat that these difficulties pose to the individual's continued goal pursuit could be overcome by minimizing distractions from competing goals, envisioning how happy she or he would be if employment as a real estate agent is realized, and reinforcing perceptions that she or he has the necessary knowledge, skills, and abilities to excel in that career field. Empirical support for this in the work domain is reflected in findings that goal-engaged individuals enhanced their causal beliefs that they had the ability, social connections, and effort to attain their career goals (Shane, Heckhausen, Lessard, Chen, & Greenberger, 2012). Causal beliefs that emphasize personal control over goal attainment correspondingly promote and support work-related goal engagement processes and progress toward goal attainment (Kay, Shane, & Heckhausen, 2017; Shane et al., 2012; Shane & Heckhausen, 2013, 2016b, 2017).

Over time, opportunities to realize the pursued goal may begin to dwindle, at which point individuals enter the urgent-phase of goal engagement. In this phase, selective primary and secondary control strategies are increased and compensatory primary control strategies become implemented to maximize the likelihood that the goal can be attained before the opportunity to do so vanishes. Revisiting our example, asking friends, relatives, or mentors to provide a reference or their advice on how to attain a job, or moving to a new area where the likelihood of finding a job is increased are examples of compensatory primary control strategies that may be enacted during the urgent-phase of goal engagement. If opportunities vanish, or the costs of further pursuing a given goal become prohibitive (e.g., if they impede progress in other important life domains), compensatory secondary control strategies are enacted. Compensatory secondary control strategies mitigate the adverse effects of failing to reach a goal and prepare the motivational system for reengagement through the start of a new goal cycle. For example, an individual who fails to secure employment in her or his chosen field may devalue that original goal, remind oneself that other people are also unable to find a job in that career field, and begin to consider alternative career fields to pursue.

## LIFESPAN TRAJECTORIES OF CONTROL CAPACITY AND CONTROL STRIVING

### Primary Control Capacity in Different Careers

While individuals' primary control capacity generally follows a bell-shaped trajectory across the lifespan, career fields vary substantially in the peak and slope of primary control affordances (Heckhausen et al., 2017). On one end, some careers (e.g., construction jobs and other manual labor requiring little training) offer rapid ascent to peak levels of capacity, but just as quickly opportunities for further growth in primary control capacity stagnate and even decline. On the other end, some careers considerably delay opportunities for substantial primary control growth, but offer correspondingly prolonged opportunities for continued growth over the course of one's career (e.g., careers requiring elaborate training, such as academic or artistic careers). The extent to which the primary control capacity offered in one's workplace matches one's actual capacity for primary control has important motivational and socioemotional implications, which we outline below.

#### *The Early-Peak Career*

Many service and labor jobs are available with little to no formal training. Moreover, these jobs offer prospects for rapid tenure-based advancement from entry level to front-line management positions. For example, someone who begins working at a local fast-food restaurant may quickly progress from cleaning, to cooking or cashier work, to being the shift supervisor.



This matches well with the rising primary control capacity of adolescents and young adults, likely leading to early engagement and satisfaction in work if the job is not seen as temporary, involuntary, or unneeded. However, promotion opportunities quickly diminish in these work situations, leading to an early and low plateau in primary control capacity. By the latter stages of young adulthood, individuals in early-peak career fields may have mastered and exhausted the challenges and opportunities of their work situation while their overall primary control capacity continues to rise. This disconnect worsens through midlife and remains a deficiency through the typical age of retirement. Thus, individuals in these jobs may be happy and feel competent during the transition to adulthood. However, those who remain in, or return to this employment in mid to later adulthood will likely become disenchanted and disengaged with their work, pushing them to seek other employment opportunities or look to other areas of life (e.g., taking on a hobby involving elaborate skills) to satisfy fulfillment and competence needs.

### *The Mid-Peak Career*

Many technical, healthcare, teaching, and trade jobs require some degree of formal training through an apprenticeship, or a vocational or university degree. The relatively late career entry is compensated by a higher and later-in-life peak in primary control capacity than early-peak careers. These career fields mirror the typical primary control capacity through much of adulthood, with a couple of exceptions. The first being the delayed career entry, which may occur a step later than the rise in one's more global primary control capacity. The extent to which these trajectories of reaching peak levels of mastery, competence, and control over one's work situation are out-of-step with one's rising primary control capacity over life in general may lead to frustration as individuals try to secure employment and gain competence in their field of expertise. The second is the limited ceiling in primary control capacity occurring in midlife, which may not reflect a given individual's overall primary capacity ceiling or preference for growth through late adulthood. The magnitude of this gap can be expected to be related to feelings of being undervalued and underappreciated, potentially causing individuals to prematurely reduce their organizational commitment, or seek out alternative yet-related employment (e.g., management position). However, to the extent that one's primary control capacity mirrors that which is offered by their employment, an individual is likely to remain motivated and feel adequately competent in and fulfilled by their work from career entry through retirement.

### *The Late-Peak Career*

Many professional jobs require extensive training that considerably delays and prolongs career entry. Moreover, the complexity of these careers often prevents individuals from ever reaching the maximum primary control

capacity afforded within the profession. The delayed and difficult journey to career entry severely challenges individuals' motivational system, requiring sustained commitment to an uncertain and far-away goal. As a result, individuals on this pathway risk violating the *management of goal consequences* and *maintenance of goal diversity* heuristics, both during career entry and throughout establishing and maintaining one's position. For example, to become a medical doctor one needs to spend considerable time and effort to do well in secondary and postsecondary education, secure internships and other extracurricular activities that may help distinguish oneself from other candidates, perform well on medical school entrance exams, obtain appropriate letters of recommendation, and fine tune application materials just to gain entrance into medical school. Medical school then requires an even greater and sustained focus to master the material and secure a placement, which then needs to be completed before one can even start practicing as a medical doctor. The amount of motivational investment needed throughout this process could drain motivational resources away from other areas of life, such as social relationships. Compromising development in these other important areas of life risks violating the management of goal consequences and maintenance of goal diversity heuristics, and in turn, could endanger the individual's ability to live a full, balanced, and satisfying life.

The late-peak career offers other unique challenges, which if unmet are likely to result in feelings of inadequacy. Extending our prior example, a newly hired medical doctor may feel ill-prepared to handle the demands and expectations of his or her new position. If progress toward closing the demands-competence gap are not made, then feelings of inadequacy may emerge, especially if one's colleagues appear to have mastered the profession's tasks and challenges. Even if competence in the day-to-day responsibilities of the position is attained, feelings of inadequacy may also arise when one's personal primary control capacity peak does not reach the overall primary control capacity offered in the profession. For example, the medical doctor may stay in touch with former classmates from medical school who have since gone on to achieve greater prominence in the profession. Counterbalancing these potential negative effects, the lifelong prospect of continual growth in primary control capacity offers individuals the opportunity to find long-term meaning, purpose, and intrinsic commitment in their work life.

### **Consistent Primary Control Striving**

Individuals sustain consistently high levels of primary control striving across the lifespan to maximize their primary control capacity (Heckhausen, 1997). However, the attractiveness of expending high levels of primary control striving at one's work decreases with age (Kanfer & Ackerman, 2004). Moreover, as individuals' primary control capacity declines, the effectiveness of their primary control striving declines as well. To offset this and other

challenges to one's primary control potential, individuals increasingly need to employ volitional, selective secondary control strategies to sustain a robust engagement and commitment to the career goal (Heckhausen et al., 2010).

In work situations that are not inherently motivating but that require the individual to perform at an optimal or near optimal level, selective secondary control strategies could be enacted to maintain task-specific focus and sustain organizational commitment. For example, a computer programmer who is not particularly interested in coding certain routines could remind herself of the importance of the program she is developing, or of the sense of accomplishment and promotion possibilities that the finished program may provide her with. However, maintaining commitment to a career field with which one is mismatched will likely exhaust the volitional system over time, which could lead to job burnout (Maslach, Schaufeli, & Leiter, 2001).

In early career stages, individuals may volitionally enhance their perceived value of their career and the opportunities for future promotion within the organization. These secondary control strategies would amplify individuals' day-to-day motivational investment, in turn increasing the likelihood of being successful in that career track. However, when these strategies are enacted, they risk blinding the individual to the actual prospects for promotion and other possible routes of career development. If one commits toward the uncertain potential of a future promotion that never materializes, there is an increased likelihood of experiencing feelings of disenchantment, entrapment, and the desire to seek employment in another organization or different career field altogether (Carson & Carson, 1997).

### **Disengagement and Goal Adjustment Via Compensatory Secondary Control**

While selective secondary control strategies enhance goal commitment, compensatory secondary control strategies facilitate disengagement and goal adjustment (Heckhausen et al., 2010). Disengagement could be freely chosen (e.g., retire, pursue a different career field) or be forced upon the individual (e.g., terminated employment, competing constraints from other areas of life such as health or family). In either instance, individuals are generally best served by quickly and decisively disengaging from the previous goal in a self-protective manner. Doing so will free up the individual's limited motivational resources that can then be directed to a new goal pursuit.

Disengagement is likely easier done when the individual chose, and thus anticipated, the disengagement. An individual's compensatory secondary control system is more challenged when the disengagement from the previous career or job is forced by factors outside of the individual's control. To minimize floundering, the individual will need to distance himself or herself from the previous job by devaluing it, reminding himself or herself that other people are in similar or worse situations, enacting self-protective causal

beliefs for why the employment was terminated, and identifying a new career or job to pursue. Parallels can be drawn to the job search literature, which indicates the likelihood that individuals will secure future employment depends on their belief that they can obtain future employment (maintain self-concept), setting of clear and reachable goals related to finding a new job (identify new goals to pursue), and engagement with their job search pursuits (reengagement) (Caliendo, Cobb-Clark, & Uhlendorff, 2015; Kanfer, Wanberg, & Kantrowitz, 2001; Liu, Huang, & Wang, 2014).

In addition to disengagement, individuals need to employ compensatory secondary control strategies when adjusting their goals. These situations arise throughout an individual's work-life, such as when responding to the realities of the labor market during career entry (Godofsky, Zukin, & Van Horn, 2011; Quintini, Martin, & Martin, 2007; Shane & Heckhausen, 2017), being sensitive to opportunities within and across work situations (Fugate, Kinicki, & Ashforth, 2004), adapting to current or anticipated work-related challenges (Johnston, 2016; Rudolph, Lavigne, & Zacher, 2017), and switching from growth and learning goals to maintenance and generative goals during later career stages (Kanfer, Beier, & Ackerman, 2013). In each of these instances, being able to protect one's self-esteem while disengaging from the previous goal, identifying a desired alternative goal and engaging with this new goal will allow the individual to most adaptively manage these challenges should they arise.

### Compensatory Primary Control at Different Career Stages

Compensatory primary control strategies may be differentially effective or difficult to implement, depending on individuals' occupational field and point in the lifespan. Compensatory primary control strategies, such as asking for other's help, seeking out advanced training opportunities, and learning new technologies or other external resources, is instrumental to quickly closing any competence gap during career entry. Competence gaps at later career stages may be difficult to address for older workers due to the increasing difficulty of learning new technology (Ng & Feldman, 2012, 2013a), deficits to information processing speed, working memory performance and other fluid intelligence aspects (Jeske & Stamov Roßnagel, 2015; Salthouse, 2012; see also Chapter 2 of this book), and goal reprioritization, effort reduction, and threats to self-esteem that diminish the inherent appeal of learning new information (Kanfer & Ackerman, 2004). In these situations, compensatory primary control strategies are essential for older workers to prevent competence-gaps from emerging or widening.

Emerging research is starting to outline resources that workplaces can provide to support older workers (for review, see Truxillo, Cadiz, & Hammer, 2015). Of note, increasing positive relations among groups, adjusting human resource practices to an employee's age, implementing structured

and age-sensitive training programs, making technology and other aids more accessible, and providing career management guidance are all interventions that should increase the likelihood and effectiveness of older workers compensatory primary control strategy use. Compensatory primary control strategies also include finding alternate routes toward goal attainment. This becomes heavily relied upon and beneficial in problem-solving or creative career fields where new solutions to emerging or existing challenges are required (Kim, Hon, & Lee, 2010), especially under constrained or difficult situations (Ng & Feldman, 2013b).

## **SOCIETAL STRUCTURING OF OPPORTUNITIES FOR CONTROL STRIVING: THE CASE OF CAREER STRIVING**

Societies differ in their structuring of opportunities. When considering one's worklife, broadly these structural differences include the permeability of the labor market, the strength of the welfare safety net, and the transparency of the school-to-work transition (Buchholz et al., 2009). These differences impact each stage of an individuals' work-life, some of which will be discussed below.

### **Career Entry and Social Mobility**

Societies that offer clear and scaffolded linkages between school-to-work require the least motivationally intensive career entry (Heckhausen & Shane, 2015). This is generally done through early-appearing educational tracks that tailor individuals' education toward acquiring occupation-specific skills. In ideal situations, individuals in these societies are canalized toward a career track that reduces uncertainty at the expense of one's ability to switch fields. However, when employment opportunities become limited, as was the case immediately after the recent recession, individuals risk completing highly specialized and nontransferable training only to be unemployed, periodically employed, needing to seek further or alternative training, or dropping out of the work-force altogether (Quintini & Manfredi, 2009).

In societies where the education–occupation linkages are less explicit, individuals progress through a more open educational system that encourages career-goal exploration and the ability to switch employment fields. However, young adults in this system face increased pressure to attain higher levels of education to set themselves apart from their peers, yet they are typically uncertain in how or if these skills and qualifications will translate into employment opportunities (Aronson, 2017). Further challenges in this system arise when individuals are unprepared for the realities of the labor market and need to adjust their beliefs and expectations accordingly without compromising their long-term chances of worklife satisfaction and success (Shane & Heckhausen, 2017).

## Midcareer Transitions

Individual differences in identifying promotion opportunities, and understanding and attaining what is needed for promotion while not compromising progress in other domains of life are important features of one's career progression through midlife. Middle-aged individuals may need to balance how aggressively they seek out new employment opportunities with the financial, social, and emotional needs of their family. Work-family conflict is particularly problematic during midlife as competing demands in the work and family domains mount (Huffman, Culbertson, Henning, & Goh, 2013). If goal diversity is not maintained and negative cross-goal domain conflicts are not minimized the individual faces a greater likelihood of experiencing work-family conflict.

On the societal and organizational levels, permeability within and between career tracks influences what employment and promotion opportunities are available and the balance between occupational mobility versus embeddedness (Feldman & Ng, 2016). In highly permeable societies or occupations, mobility experiences are becoming increasingly typical (Biemann, Zacher, & Feldman, 2012), as individuals adapt to an increasingly insecure labor market (OECD, 2017) by taking on a more agentic and self-directed role in their career development (Briscoe, Henagan, Burton, & Murphy, 2012). This is a strong test of the motivational system, with correspondingly strong rewards for successful control strivings (Converse et al., 2012). Moderating the pressure on one's decisions to stay at or leave a less-than-ideal employment situation, the welfare and severance system influences the amount of risk an individual may be willing to take when seeking a change of employment.

## Late-Career Transformation, Stagnation and Decline

Further challenges arise as individuals move toward the end of their work-life. For instance, individuals differ in how they respond to a "career-plateau" where further growth is increasingly unlikely (Rotondo & Perrewé, 2000). By transitioning into a mentoring role and maintaining high levels of primary control-related strivings, individuals may be able to avoid experiencing a career plateau (Wang, Hu, Hurst, & Yang, 2014). From a developmental perspective, shifting into a management role may be particularly beneficial for individuals who are embedded within their occupation or organization, but are nearing retirement age or have all but exhausted growth-oriented career opportunities (e.g., promotion, learning new skills, changing careers). This switch into a management position may allow the individual to feel valued and generative without the pressure to continually learn new skills and pursue new opportunities, which in turn may allow the individual to stay engaged and productive.

As individuals near the end of their work life, differences in anticipating and responding to retirement become prominent when balanced against one's financial and socioemotional needs (Wang & Shi, 2014), and the norms, structure, and opportunities in the encompassing societal and organizational context (Fisher, Chaffee, & Sonnega, 2016). Some companies restructure work requirements as employees near retirement (job design) (Hackman & Oldham, 1976), and some individuals take a more proactive approach to restructuring their work situations (job crafting) (Wrzesniewski & Dutton, 2001). These attempts to align employee interests and strengths with workplace demands become increasingly important for sustaining employee engagement and productivity at later career stages (Kooij, Van Woerkom, Wilkenloh, Dorenbosch, & Denissen, 2017; Truxillo, Cadiz, Rineer, Zaniboni, & Fraccaroli, 2012).

According to the motivational theory of lifespan development (Heckhausen et al., 2010), we can expect that individuals will be most able to adapt effectively to late worklife when they can plan and prepare for adaptive changes in job requirements and ultimately retirement (optimized goal setting). Individuals can engage with the retirement transition by directing their thought and effort toward being able to retire (selective primary control strategies), recruiting help from other people and outside resources as needed (compensatory primary control strategies), and reminding themselves of the benefits that retirement will bring (selective secondary control strategies). Retirement involves disengaging from one's prior work situation, which can be facilitated by normalizing retirement and devaluing the importance of work relative to other important areas of life (compensatory secondary control strategies—self-protection), identifying alternative goal pursuits for postretirement life (compensatory secondary control strategies—goal adjustment), and reengaging with these goal pursuits (reengagement).

## **CONGRUENCE BETWEEN CONTROL STRIVING AND CONTROL OPPORTUNITIES**

According to the MTD, the adaptiveness of an individual's goal choice, pursuit, and disengagement is best considered within the context of her or his opportunities for control (Heckhausen et al., 2010). This congruence principle states that goal engagement and goal disengagement become adaptive when they are congruent with an individual's goal-relevant control potential. Thus, under conditions of high control, goal engagement is generally adaptive, whereas goal disengagement and adjustment are generally adaptive under conditions of low control. Individuals are faced with several challenging decisions during their worklife where they need to consider their own needs, interests, capabilities, and opportunities. These considerations can compete or coincide with one another, producing degrees of congruence that influence the adaptiveness of a given goal choice and motivational engagement or disengagement strategy.

### Benefits of Congruence: Example of Career Entry

During career entry, individuals must choose an occupation, secure a position, and establish work-relevant competence, while anticipating and being receptive to alternative employment opportunities. The more closely matched a given occupation is to an individual's skills and readiness to learn new occupation-specific skills, the more likely the individual is to secure employment and become competent in that field. A deliberative mindset (Gollwitzer, 2003), wherein available opportunities are weighed in an unbiased way, is helpful at this stage of an individual's work life. In societies with clear school-to-work linkages, identifying employment routes that are closely calibrated to one's skills is generally most adaptive, while in societies with greater permeability, individuals may be best served over the long-term by choosing optimistic employment options (Heckhausen & Chang, 2009).

Once a clearly defined and suitable career has been identified, mobilizing one's motivational resources in pursuit of that goal helps in successfully navigating the school-to-work transition (Haase et al., 2008; Vuolo, Staff, & Mortimer, 2012). By adjusting causal beliefs and related control perceptions (secondary control strategies), individuals can increase their engagement to maximize their ability to reach a desired goal, or disengage from / adjust their career goal so that reengagement with a more congruent goal can proceed (Shane & Heckhausen, 2016a, 2017). As individuals approach a developmental deadline, they need to step up goal engagement to still make it. Alternatively, when passing the deadline is inevitable, adjusting and reengaging with a more attainable career goal helps prevent a period of floundering or wasted goal pursuit (Tomasik, Hardy, Haase, & Heckhausen, 2009).

### Costs of Incongruence: Midlife Career Change

Failure to consider one's capabilities in relation to available opportunities fully, or remaining in an implemental mindset (Gollwitzer, 2003) held over from one's education or training could keep individuals focused on a given career path that ultimately turns out not to match their skills or desire to attain the requisite occupation-specific skills needed to thrive. At the early stages of one's worklife, there is greater flexibility and time to switch to a more congruent career field. However, the further individuals travel down a career path, the more entrenched or embedded within that occupation or organization they become (Ng & Feldman, 2007), making it more difficult to secure and thrive in alternative occupations (Wanberg, Kanfer, Hamann, & Zhang, 2016). When a career field and related demands become incongruent with an individual's skill set, interests, and resources, the individual's risk for occupational burn-out increases (Bakker, Demerouti, & Sanz-Vergel, 2014). By matching one's engagement to situational control in the work domain (goal-opportunity congruence), individuals are better suited to thrive under conditions of high control and protect their motivational resources, health, and well-being under conditions of low control (Shane & Heckhausen, 2012).



## **ACTION PHASES OF GOAL ENGAGEMENT AND DISENGAGEMENT**

### **Goal Engagement During the Action Phase**

Individuals' goal engagement changes as they shift from nonurgent to urgent phases of goal pursuit (Heckhausen, 1997, 1999; Heckhausen et al., 2010). During the nonurgent phase when opportunities to attain the goal are still prevalent, individuals' goal pursuit is moderate and mainly composed of selective primary control strategies with selective secondary control strategies relied upon as needed to boost motivational commitment. For example, after working at a company for a while, an individual may become aware of long-term promotion opportunities within the organization. This could lead the individual to set the promotion as a goal, and shift their motivational investment into performing their day-to-day responsibilities at a level wherein their work may be recognized as exemplary by management. When encountering difficult days or events, the individual may overcome these setbacks by reminding herself (selective secondary control strategy) that by working hard (selective primary control strategy) she will put herself in a good position to secure the desired promotion.

As individuals approach a developmental deadline, goal engagement ramps up to maximize the likelihood of attaining the goal before opportunities to do so diminish. During this stage increased effort expenditure (selective primary control) is complemented by strong volitional support (selective secondary control), and outside resources are recruited or alternative routes toward goal attainment are explored (compensatory primary control). Returning to our example, as time goes by and a promotion is not given, yet other coworkers receive promotions, the individual may sense that promotion opportunities are becoming increasingly limited and less likely to be realized. This signals a deadline, which could prompt enhanced effort expenditure at work, continual reminders of the value of attaining a promotion, and that one is worthy of receiving the promotion, asking coworkers or management for advice or help, and seeking employment at other organizations.

### **Action Crisis Between Engagement, Disengagement and Reengagement With Adjusted Goal**

Ideally, shifts between phases within a goal cycle are done quickly and purposefully (Heckhausen et al., 2010). Failure to do so, for example when dwindling opportunities require a disengagement, could result in an action crisis (Brandstätter & Schüler, 2013; Brandstätter, Hermann, & Schüler, 2013). During career entry, this situation could arise when individuals have invested in education and training for a career, and then realize that they do not enjoy the job or for some reason cannot do the job well. The high

volitional commitment and extensive investment of time and effort make it hard to assess one's fit with the previously chosen career realistically, and thus could entrap an individual even as early as during career entry.

At some point, individuals may encounter a career plateau where future opportunities for growth diminish. This sets up a potential action crisis at a later point in career development as the individual needs to decide between continued commitment to the current job or disengagement from that job so that new employment can be sought out. Here, the individual should commit to the decision to remain at the current job or go to a new job. Not doing so would compromise his or her ability to perform at a satisfactory level in the current job (should he or she choose to stay) and thus risk termination, or the ability to secure and succeed in the new position (should he or she choose to leave).

### **Failure, Set-Backs and (Self)-Protection of Motivational Resources**

Over the course of one's worklife, individuals will need to respond to difficulties in pursuing and attaining their work-related goals. These difficulties can vary across occupations and career-phases, and individuals' responses to these difficulties should vary accordingly. For individuals who are reliant upon their job, who have limited alternative employment options, or are in an occupation that is instrumental to or aligned with their career goals, difficulties should generally be addressed with enhanced goal-engagement strategies. These can include increasing one's effort to overcome the setback (selective primary control), reminding oneself that the difficulty will be overcome and that the career path should and can be pursued (selective secondary control), and mobilizing aid from other people or other external resources (compensatory primary control).

For individuals who are not happy in their current work situation, or are considering retirement, disengagement strategies become increasingly attractive in response to failures, setbacks, and other difficulties encountered at work. If disengagement is pursued, it should be done quickly so that motivational resources can be directed to other goal pursuits. Strategies that may help make the disengagement process as discrete as possible include identifying attractive alternative employment options, seeking additional training so that new employment options become available, or reprioritizing the importance of work relative to other domains of life. Disengagement should also be done in a self-protective manner, whereby the individual minimizes any negative emotional or self-concept effects associated with disengaging from the previously pursued occupational goal, career field, or job.

## SUMMARY AND FUTURE DIRECTIONS

Applying lifespan and motivational theory to industrial and organizational psychology can help move the field forward. Here we have outlined our motivational theory of lifespan development, drew parallels to existing work within the field of industrial and organizational psychology, and offered suggestions for how integrating the motivational theory of lifespan development into the field could prove fruitful. These suggestions include the consideration of: (1) how control strivings and control capacity vary across the lifespan; (2) how these general trajectories differ across individual, organizational, and societal levels; (3) how individual characteristics and societal and organizational contexts influence the type and intensity of motivational strategies, and in turn, influence their adaptiveness; (4) how phases of the goal cycle are organized, and transitioned through; (5) what motivational and volitional strategies are most relevant and effective within each phase of the goal cycle; (6) how individuals optimize their development throughout their worklife.

Readers interested in incorporating our theory into future studies should know that the Optimization in Primary and Secondary Control Scale is widely used in our research program to measure domain-general and work-specific control strategies. These scales are available from the authors upon request. We conclude with listing a few specific topics that may prove fruitful for future research to pursue: (1) Career-goal choice, pursuit, and adjustment during the school-to-work transition; (2) Motivational response to stagnation in career growth, particularly during midlife; (3) Individual's self-regulation strategies and challenges in response to organizational and societal structuring of the retirement transition; (4) Role of alternative goal pursuits in predicting retirement timing and postretirement well-being; (5) Self-regulatory process of attaining congruence between one's control capacity and degree of engagement in the work domain. Although our own and others' research has begun to examine these areas, more research and theoretical integration is needed. It is our hope that this chapter will help inspire some of this future work.

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