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Career Management over the Life-Span

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Introduction

Career management over the life-span has become increasingly important due to the extension of working lives in most developed and many developing countries. The extension of working lives, in fact, is a politically enforced phenomenon as a reaction of more or less constantly low birth rates and increased life expectancies that have caused global population aging. In the last decade, several developed countries have introduced new regulations to gradually increase retirement age (i.e., eligibility age of receiving a public pension) from 65 to 67 in the mid-term future (e.g., Australia, Canada, Denmark, France, Germany, Greece, Israel, Netherlands, Poland, Spain, or the United States) (Organization for Economic Cooperation and Development [OECD], 2013). Further, plans to increase the retirement age even beyond 67 exist in some countries, such as in the United Kingdom, which plans an increase of retirement age to 68 between 2044 and 2046 (OECD, 2013). In addition to the normal retirement age, some countries have implemented a policy to allow people, who have contributed for a certain time (e.g., 40 years in Greece or 45 years of minimum contributory record in Germany), to receive a public pension before retirement age (e.g., starting from 62 in Greece or 63 in Germany) (OECD, 2013; German Statutory Pension Insurance Scheme, 2015). These new regulations will have a critical impact on the labour market in the future.

These days, the labour force participation rate in many developed countries (e.g., Australia, Canada, Denmark, France, Germany, Greece, Israel, Netherlands, Poland, Spain, the United Kingdom or the United States) decreases at higher age groups as can be seen in Figure X.1. Although there are differences between the selected countries, an inverted U-shape is clearly visible for all of them. A high labour force participation rate can be found for the middle age groups 25 to 34, 35 to 44, and 45 to 54. In these three age groups the labour force participation varied only little between the selected countries (25 to 34: 81.2 per cent to 89.1 per cent, average of 85.3 per cent; 35 to 44: 82.2 per cent to 90.1 per cent, average of 87.1 per cent; 45 to 54: 78.3 per cent to 88.5 per cent, average of 83.9 per cent). A medium labour force participation rate can be found for the young and old age groups 15 to 25 and 55 to 64. Further, in these age groups the labour force participation varied quite a bit (15 to 25: 28.0 per cent to 67.4 per cent, average of 51.1 per cent; 55 to 64: 41.1 per cent to 69.1 per cent, average of 59.8 per cent). A low labour force participation rate can be found in the oldest age group, also with great variations between the selected countries (65 to 69: 4.6 per cent to 38.6 per cent). However, although the labour force participation decreases among higher age groups, it has increased over time. For example, in Germany, the labour force participation rate has increased sharply for the older age groups over the last 10 years (i.e., 2005 to 2014 for people aged 55 to 59: 73.3 per cent to 81.0 per cent; 60 to 64: 31.7 per cent to 55.8 per cent; 65 to 69: 6.6 per cent to 14.0 per cent) (OECD, 2015). In the future, a further rise of labour force participation among older age groups can be expected due to the new regulations to increase retirement age being introduced.

Insert Figure X.1 about here

With extending working lives becoming more prevalent in the contemporary society, workplaces have become more age-diverse in nature (Truxillo, Finkelstein, Pytlovany, &

Jenkins, 2015). This has the potential to facilitate positive outcomes (e.g., increased employee well-being and organisational commitment, Lehmann-Willenbrock, Lei and Kauffeld, 2012 or higher team performance, Wegge, Roth, Neubach, Schmidt, & Kanfer, 2008). Yet, there is a risk that the increased age diversity produces negative outcomes due to emerging "faultlines" between different age groups (van Knippenberg, Dawson, West, & Homan, 2011). For this reason, the understanding of career management over the life-span is of increasing importance. The present chapter will highlight career management over the life-span from both the individual and the organisational perspective. To begin with, we provide a working definition of career and career management, and then conceptualize the phenomenon of generation(s), the different meanings of age, and career development over the life-span. Further, we outline individual career management based on social cognitive career theory. Also, we discuss its relevant proximal and distal antecedents. In addition, we introduce organisational career management by differentiating and comparing prevalent stereotypes and empirical findings on age-related differences at work. In order to link individuals' interests, strengths, and potentials to organisational success, we derive evidence-based career management strategies and practices for human resource management. This will be followed by implications for future research and a conclusion on career management over the life-span.

Career and career management

Social and economic changes, such as organisational restructuring, increased global competition, higher levels of education, and rapid technological development have led to a renunciation of long-term employment (Baruch & Bozionelos, 2011; Sullivan, 1999). As a consequence, there has been "a shift away from stable, upward, linear career paths motivated by loyalty and stability, toward dynamic, multi-directional and boundaryless career paths motivated by the pursuit of individualistic goals and values" (Lyons, Schweitzer & Ng,

2015: 9). Taking these changes into account, we provide a working definition of career and career management in this section.

In contrast to the popular understanding of career as advancement (i.e., moving up the "career ladder") or career as profession (i.e., occupations with clear pattern of systematic upwards development), Hall (2002) defines career as "the individually perceived sequence of attitudes and behaviours associated with work-related experiences and activities over the span of the person's life." (p. 12). Following this definition, a career is not limited to certain professional occupations; rather it refers to all types of occupations. In addition, a career includes both paid and unpaid activities related to work and organisational settings, thus including homemaking or voluntary work. Further, this definition highlights career as a subjective experience and a lifelong process of evaluating both subjective (i.e., attitudes) and objective (i.e., behaviours) aspects of work-related activities. This indicates that career success or failure is best understood from the careerist perspective (i.e., the person whose career is looked at) rather than any other interested parties, such as employers, spouses or friends. In emphasizing the individual perspective, Hall (2002) explains that because there are no absolute criteria, the evaluation of a career is best done by the careerist in line with his or her own specific evaluation criteria. Also, Hall (2002) argues that the contemporary prevalent ethic of self-direction and internal control leads to the rising recognition of individuals' right and responsibility to make certain (life and) career choices.

Based on the definition of career as a sequence of work experiences over the life-span, Voelpel, Sauer and Biemann (2012) highlight the intersection of individual and organisational interests. As employees' individual career success is likely to facilitate organisational success (Judge, Higgins, Thoresen, & Barrick, 1999), organisations have an increasing interest in managing employees' careers. There are several attempts at investigating the individual and

organisational success factors (e.g., Judge, Cable, Boudreau, & Bretz, 1995; Seibert, Kraimer, & Crant, 2001; Wayne, Liden, Kraimer, & Graf, 1999). A meta-analysis by Ng, Eby, Sorensen, and Feldman (2005) revealed that both individual and organisational career management are likely to support career success (i.e., salary, promotion and career satisfaction). For this reason, we investigate career management from the individual and the organisational perspective. On the one hand, career management can be defined as the individual planning and decision-making process and on the other hand, career management refers to organisational career development strategies that include a wide range of tools, such as personal training and skill development methods (Voelpel et al., 2012).

Age, generation(s) and career development over the life-span

In order to understand career management over the life-span, it is important to differentiate and compare the concepts of age, generation(s), and career development over the life-span regarding their theoretical embeddedness. In this section we briefly discuss the phenomenon of generation(s) and conceptualize the different meanings of age, as well as introduce career development over the life-span.

Understanding the Phenomenon Generation(s)

Defining generations is a challenging matter due its conceptual complexity. Attempts to understand the generational phenomenon can be traced back to the early 1950s (Parry & Urwin, 2011). As one of the most notable works on the sociological foundations of generations, Mannheim (1952) elaborated the existence and transition of generations based on five characteristics in society: (1) emerging of new members in the cultural process; (2): disappearing of former members; (3) participation of members is temporally limited in the historical process; therefore (4) transmission of cultural heritage; and finally (5) continuous transition from generation to generation (Parry & Urwin, 2011). As a result, a generation is

rather a 'social location' than a 'concrete group'. Members of a generation have a common location in the social-historical process as they share the same year of birth (Parry & Urwin, 2011). As such generations refer to a group of people born over a certain span of years (Strauss & Howe, 1991). Based on generational cohort theory, researchers have conceptualized generations as birth cohorts sharing economic, political, and social events as a source of generational identity (Pritchard & Whiting, 2014). Extending this approach, Joshi, Dencker, Franz, and Martocchio (2010) highlight different facets of generational identity, which are cohort-based identity, age-based identity, and incumbency-based identity. Further, Lyons, Ng, and Schweitzer (2014) relate the generational phenomenon to career-related factors, such as career development. Due to the plurality and entanglement of its different approaches, the phenomenon generation(s) is a rather abstract concept that does not allow making tangible propositions about career management. In contrast, age is a more concrete concept allowing a higher degree of elaboration with regard to career-related behaviour. In the following, we, therefore, reveal the different meanings of age that are useful to understand career management from a work-life-span perspective.

Conceptualization of age and its different meanings

With regard to the work context, age has five different meanings (Kooij, Lange, Jansen, & Dikkers, 2008). First, chronological age refers to the calendar age, which has often being criticized due its simplification of the aging process. Although the boundaries for age groups are not fixed, research often describes people above 50 years as older workers (Finkelstein, Ryan, & King, 2013). Second, functional age is based on workers' performance recognizing the great variation of individual abilities and functions across different ages. Over time, biological and psychological changes influence the functional age of people. Third, subjective age refers to the social perception of age indicating how old someone behaves and feels in comparison with a certain age cohort (Kaliterna, Larsen & Brkljacic, 2002). Different age

norms shape the individual perception of age with regard to occupation, affiliation, or society. Fourth, the organisational age refers to the seniority within job or organisation, sometimes reflecting a certain career stage. Fifth, the life-span concept of age contains some elements of the other meanings of age but advances the concept of age with regard to the behavioural changes during the life cycle (Kooij et al., 2008). According to this meaning many factors (e.g., normative, age-related biological, environmental determinants) are likely to impact the aging process, which, in turn, influences career-related behaviour (Kooij et al., 2008; Lange et al., 2006). Therefore, the life-span concept of age is particularly useful for explaining career-related behavioural change that takes place in different career stages.

Career development over the life-span

Relying on the life-span concept of age, career management includes the development of career-related interests, goals, decisions, and actual behaviour over the life-span. In this section, we reveal career development over the life-span focusing on career-related behavioural changes according to the different life stages based on the career development theory (also known as life-span, life-space theory of careers or theory of vocational development; Super, 1953; Super, 1990). Despite rapid change, turbulence and increased complexity, life and career stages are still relevant; yet, they are less defined, linear and predictable as they used to be (Hall, 2002).

To begin with, career development over the life-span requires life-space that people use for their career as part of their life (Hartung, 2013). People take multiple roles in life based on the constellation of their different social positions (Fasbender & Deller, 2015). For instance, a person occupies the role of being a spouse, mother, sister, friend, golfer, and volunteer next to her work role. Although the work role is clearly an important role for many individuals but yet, it is only one among others. A person’s multiple roles interact with each other based on

the resources (e.g., energy, money, or time) that are available. Therefore, career choices depend on the circumstances related to the different social positions. Referring to the previous example, with the birth of her second child, she may have fewer resources available for her work role than before depending on the social support from significant others (e.g., spouse, parents). This illustrates how multiple roles interact with each other in relation to environmental factors. Further it is important to note that the allocation of resources between people's multiple roles refers to the meaning that each role has in their lives (Fasbender & Deller, 2015).

With increasing age, career development refers to several (forwards and backwards) transitions from one life stage to another as can be seen in Figure X.2. In a prototypical career pattern, people pass through a sequence of life stages (i.e., growth, exploration, establishment, maintenance, and disengagement or reengagement) involving different career-related tasks over the life-span. Yet, the unique interplay of self and relevant environmental factors yield in significant individual differences within this sequence (Hartung, 2013). Thus, career management over the life-span may form stable, unstable or even multiple-trial career patterns (Hartung, 2013). In the following, we describe the five life stages and its career-related tasks.

Insert Figure X.2 about here

Growth. The growth stage (spanning *birth* to *age thirteen*) involves the initial career-related tasks curiosity, fantasies, interests and capacities answering the question "Who am I?" (Super, 1990). In this life stage children start learning to gain control over their life, to enhance confidence in their abilities, and to make decisions. Children internalize social competencies by getting in touch with other children and balancing competitive and cooperative behaviour

to achieve aims and build relationships to others. In addition, by recognizing time as relevant factor children develop a perspective for the future. Adults support children in developing their competencies by acting as role models and advisors. Overall, the growth stage helps children to set the foundation for their vocational self-concept.

Exploration. The exploration stage (spanning *ages fourteen* to *twenty-four*) involves the career-related tasks crystallizing, specifying, and implementing an occupational choice and preparing for work (Super, 1990). To begin with, young adults explore the world around them and imagine themselves in various occupational roles and contexts. By reflecting on their preferences, young adults transfer their initial vocational experiences into educational and occupational choices. The exploration stage is completed if young adults have implemented their educational or occupational choices by selecting a training course, preparing, and finally, obtaining a selected vocational position.

Establishment. The establishment stage (spanning *ages twenty-five* to *forty-four*) involves the career-related tasks stabilizing, consolidating, and advancing the occupational self-concept to secure the obtained work role (Super, 1990). In this stage, people settle into their new position by fulfilling their core job duties and assimilating to the organisational culture. Further, people consolidate their occupational position by demonstrating effective work attitudes, positive relationships to their colleagues, sustained work. Eventually, people pursue new levels of responsibility to move further to positions at higher levels within or outside of their organisation. As a result, successful establishment leads to a consistent integration of the self to the work role, which, in turn, yields to a secured income and enhanced meaning in life.

Maintenance. The maintenance stage (spanning *ages forty-five* to *sixty-five*) involves the career-related tasks holding, updating, and innovating the established work role (Super, 1990). Most people experience the transition from the establishment to the maintenance stage as a critical reflection of their current position, evaluating their job satisfaction and at the same time, examining relevant goals that help determining their future career direction. As a result of this reflection process, people either decide to maintain their current position or change their occupational orientation and return to earlier stages of career development, such as the exploration or the establishment stage (this backwards development is illustrated by the black arrows in Figure X.2). Entering the maintenance stage, people hold on to job proficiency and work achievements in order to maintain their secured work position. Complementary, people update their professional abilities, skills, and knowledge to improve their job performance. Also, discovering new challenges and ways of performing tasks may help to prevent dissatisfaction with the daily routine at work, which, in turn, helps to avoid career plateaus or mid-career changes.

Disengagement or re-engagement. The disengagement stage (encompassing *ages over sixty-five*) involves the career-related tasks deceleration, preparation, and transition to retirement (Super, 1990). In this stage, most people experience decreased energy and interest for their occupational role, which yields to reducing working hours, slowing down the job and at the same time passing over knowledge, skills, and tasks to the next generation (Hartung, 2013). In many cases, this leads to a complete separation of the self from work, which requires most people to develop new life structures when entering retirement. Yet, the prototypical career development pattern becomes less meaningful with increasing age as the number of possible development paths multiplies over the life-span. Therefore, it is likely that disengagement evolves in reengagement (Fasbender & Deller, 2015). Because most people have worked for their entire adult life, their self might be closely tied to their work-role identity (Feldman,

1994), which encourages them to reengage in work after formal retirement entry (Fasbender, Wang, Voltmer, & Deller, 2016; Griffin & Hesketh, 2008; Wöhrmann, Fasbender, & Deller, 2016).

Individual career management

Individual career management can be characterized as an ongoing process of planning and decision-making toward individual work and life goals. In particular, individual career management involves taking responsibility and ownership for one's career path rather than expecting the organisation to manage one's career (Lytle, Foley & Cotter, 2015). In this section we conceptualize individual career management based on social cognitive career theory (Lent, Brown & Hackett, 1994). First, we introduce the social cognitive foundations of individual career management. Second, we highlight the process of career self-management. And third, we reveal its different proximal and distal antecedents.

Social cognitive foundations of individual career management

Triadic reciprocity between person, environment, and behaviour. More than two decades ago, Lent et al. (1994) introduced social cognitive career theory in order to explain the career management process from interest development to performance attainment. This career management process model has its roots in Bandura's (1986) general social cognitive theory, which describes an interaction between person, environment, and behaviour as can be seen in Figure X.3. This interactive relationship is often called *triadic reciprocity*, which means that all three elements influence each other in a bidirectional way. Personal factors refer to internal capabilities including cognitive, emotional, and physical resources. Environmental factors refer to external resources and the surrounding conditions. Further, behavioural factors refer to decisions and actions that are carried out by the person (in contrast to his or her capabilities). While earlier approaches have described behaviour as a function of the

interaction between personal and environmental factors, this three-way approach revealed behaviour as a bidirectional feedback mechanism. This simply means that people's decisions and actions modify environmental factors and reflect people's affect, thoughts, and interfere with subsequent behaviour (Fasbender & Deller, 2015).

Insert Figure X.3 about here

Based on the triadic reciprocity between person, environment, and behaviour, the career self-management process model reveals a person's cognitive resources as determinants for self-directed career behaviour. Among these cognitive resources are self-efficacy, outcome expectations, and personal goals that involve different self-regulatory and self-reflective processes as central elements of individual career management.

Self-efficacy. Self-efficacy can be conceptualized as the belief in one's own capabilities to manage a situation and take relevant action in order to accomplish self-directed goals (Lent & Brown, 2013). Within the motivational orientation, a person's belief about the own self-efficacy empowers him or her as a proactive agent of career-directed behaviour (Bandura, 1986; Fasbender & Deller, 2015). Rather than being an overall evaluation of self-worth (i.e., self-esteem), self-efficacy involves a dynamic set of beliefs directly related to particular career or performance domains (Lent, 2013b). As such, a person could have strong self-efficacy beliefs about his or her ability to deal with social tasks (e.g., to engage with different types of people) but feel less competent to deal with manual or technical tasks (e.g., to screw different metal parts in place). Further, self-efficacy can be distinguished in different types. *Content* or *task-specific efficacy* refers to one's belief about being able to deal with specific tasks and fulfil necessary career-related requirements (e.g., having relevant knowledge and work experience to fulfil a specific task) (Lent, 2006). *Coping efficacy* refers to one's belief

about being able to cope with career-related obstacles (e.g., discrimination at work) (Lent, 2006). *Process efficacy* refers to one's belief about being able to manage career transitions (e.g., career preparation, entry, and adjustment, role shift and change across diverse occupational paths) (Lent, 2006).

Outcome expectations. While self-efficacy is grounded in the question, "can I do this?", outcome expectations refer to the question, "what will happen if I try" (Lent, 2013b). In particular, outcome expectations can be conceptualized as the anticipation of the likely consequences of a person's behaviour. In particular, outcome expectations refer to the anticipation of *physical* (e.g., additional source of income), *self-evaluative* (e.g., work-role identity, self-satisfaction), and *social* (e.g., approval from others, intergenerational contact) outcomes that are involved in career-related decision-making (Lent, 2013b).

Personal goals. Personal goals refer to the question, "how much and how well am I willing to do this" (Lent, 2013b). As a person is more than a mechanical performer reacting on environmental forces, he or she acts as proactive agent, who applies personal goals systematically guiding a course of action to attain desired outcomes (Bandura, 1986). In particular, personal goals can be conceptualized as the intention to carry out career-related behaviour in order to produce beneficial outcomes in line with one's motivational orientation (Lent, 2013a). Personal goals vary in their degree of specificity and proximity to actual behaviour (Lent & Brown, 2013). As such, goals can be distinguished into specific career intentions and general career goals. While specific career intentions refer to a destined willingness to pursue career-related actions, general career goals refer to overall occupational aspirations that exist independent of real consideration or commitment. Further, personal goals can be differentiated in choice goals and performance goals. On the one hand, *choice goals* refer to a certain type of behaviour that a person wishes to realize within a given task or

domain (Lent, 2013b). On the other hand, *performance goals* refer to the quality of performance that a person wishes to achieve in relation to the chosen type of behaviour (Lent, 2013b).

Career self-management process

As can be seen in Figure X.4, the career self-management process model can be differentiated in the core career self-management process (shown in shaded boxes) and its proximal and distal antecedents (shown in white boxes). To begin with, we will explain the core career self-management process involving how self-efficacy, outcome expectations, and personal goals are related to actions and outcome attainments.

Insert Figure X.4 about here

In the core career self-management process, self-efficacy and outcome expectations can be seen as the initial antecedents of career behaviour. The two mechanisms promote a person's actions directly and indirectly via personal goals. Initially, the certainty of outcome attainment is decisive for the way that self-efficacy and outcome expectations determine career-related behaviour. Under very certain conditions (i.e., a high quality of performance guarantees specific outcome attainments), self-efficacy will be the predominant factor that determines career-related behaviour. Under rather uncertain conditions (i.e., outcome attainments are only loosely bound to the quality of performance), outcome expectations are of central importance for career-related behaviour. For instance, an employee, who has worked for over 10 years for an organisation with a consistently high performance quality, might be offered to continue working after formal retirement entry (i.e., receiving a state pension). However, due to the organisation's skepticism referring to the employee's work ability, his or her opportunity to continue working might be rather uncertain. Following this

example, the employee's self-efficacy as well as his or her outcome expectations are central for goal setting that together facilitates career-related outcome attainment. Should the employee belief that he or she is able to convince the organisation to hire him or her after formal retirement entry based on his or her capabilities, knowledge, and work experience (i.e., positive outcome expectations), the employee might (indirectly) be more likely to be hired. Now, should the employee belief that the organisation will not be interested in him or her because of the negative images that the organisation holds toward older workers (i.e., negative outcome expectations), the employee is likely to have lower chances to be hired independent from his believed capabilities to continue working for the organisation in retirement (i.e., self-efficacy).

That personal goals reflected in intentions determine behaviour has been proposed by various theoretical approaches, such as the goal setting theory (Locke & Latham, 1990), the theory of planned behaviour (Ajzen, 1991), or the social cognitive theory (Bandura, 1986). Also, these theoretical approaches emphasize on specific qualities that are relevant for goals in effectively determining behaviour. With regard to these qualities, personal goals should be a) explicit, b) specific, c) openly stated, c) compatible with personal values, and finally, d) proximal to the actual behaviour (Brown & Hirschi, 2013). In a nutshell, self-efficacy, outcome expectations, and personal goals are important determinants of career-related actions. In particular, actions that are goal-directed have a high likelihood to promote the desired outcome attainments compared to non-goal-directed actions. A person, for instance, who is actively seeking for a job, will be more likely to obtain a favourable job compared to someone, who is neglecting to communicate his or her occupational aspirations to others. Also, self-efficacy is directly related to outcome attainments through its central role of organizing, supporting, and persisting career-related behaviour.

Antecedents of individual career management

The antecedents of individual career management can be differentiated in proximal antecedents and distal antecedents. Proximal antecedents directly influence the core career self-management process, in particular personal goals, actions, and outcome attainments, while distal antecedents indirectly influence the career management process through learning experience as central sources of self-efficacy and outcome expectations (i.e., the very initial antecedents of career self-management).

Contextual factors and personality as proximal antecedents. As can be seen in Figure X.4, contextual factors are among the proximal antecedents of career self-management. There are objective characteristics and perceived characteristics of the environment that facilitate, restrain, or override other factors involved in the career management process, such as personality. Barriers, opportunities, and support vary in their perceived importance to individual career management, which reflects the active role that people take in interpreting the contextual factors around them (Lent et al., 1994). In the eye of the beholder, the absence of barriers (e.g., low work stress and low physical demand as good working conditions), environmental support (e.g., social or financial support), and other work-related factors (e.g., intrinsic motivation, job satisfaction, work centrality) facilitate individual career management. These contextual factors influence outcome attainment directly and also indirectly via self-efficacy, personal goals, and actions that, in turn, convey into outcome attainments (Brown & Hirschi, 2013).

In particular, opportunity structures can be seen as highly relevant contextual factors that shape career-related behaviour. In many cases, sufficient educational and socioeconomic conditions enable people to transfer their interests into personal goals. However, the interests that people have are not necessarily related to the career choices they take. For instance, it can be expected that people working in coal mines do not necessarily work out of interest to

the domain but for financial reasons, indicating how different interests and career choices can be (Fasbender & Deller, 2015). Therefore, it is important to note that some people are in the favourable position to build their career path according to their individual interests, abilities, and skills, while others might be in a less favourable position, which forces them to take any job that is available for money (Fasbender & Deller, 2015). Hence, opportunity structures are a central issue when it comes to understanding career development (Lent et al., 1994).

Supplementary to contextual factors, personality is among the proximal antecedents of individual career management. Consisting of a relatively stable set of different dimensions (i.e., traits), personality is expected to constitute people's endogenous tendencies of feeling, thinking, and acting (Brown & Hirschi, 2013). Among the big five personality dimensions, *conscientiousness* as the tendency to be self-disciplined and responsible seems to be most important for individual career management, in particular for planning and persistence of the career-related behaviour (Brown & Hirschi, 2013). Other personality dimensions are likely to facilitate career behaviour related to interviewing and networking. *Agreeableness* as the tendency to be cooperative and loyal as well as *extraversion* as the tendency to be enthusiastic and action-oriented may help coping with social interactions, while *emotional stability* as the tendency to be calm, stable, and relatively exempt from persistent negative emotions, may facilitate dealing with ambiguous situations (Brown & Hirschi, 2013). In addition, *openness to experience* as the tendency to be curious and imaginative may support career behaviour that involves imagining or reflecting diverse and possibly unconventional options to solve problems (Lent & Brown, 2013).

Learning experiences as mediator of distal antecedents. Self-efficacy and outcome expectations do not function in a social vacuum but rather operate in interaction with other central person inputs and its background environments, such as ethnicity (or race), gender,

genetic predispositions, abilities (or disabilities), and physical health in relation to contextual affordances. It is important to note that person inputs determine career-related behaviour mainly indirectly through learning experiences (i.e., mediator), which, in turn, convey into self-efficacy and outcome expectations. The mediating role of learning experiences is grounded in four types of learned information, namely personal achievements, social encouragement and influence, observational learning and modeling, and physiological and affective states (Lent & Brown, 2013).

Learning experiences function as a feedback loop reflecting previous outcome attainments that help to stabilize or revise self-efficacy and outcome expectations. At the same time, person inputs prepossess this feedback loop through social and psychological effects that emerge with career-related behaviour. For instance, people of different age groups face age-related role socialization processes that may benefit or hinder their career development (Fasbender & Deller, 2015). Following this example, in the work context, physical deprivation and decreasing work ability are often accepted as a by-product of the aging process independent of individual differences. These rather negative views on aging might hinder older people's learning experiences (e.g., through lower opportunities offered) compared to their younger counter parts, which, in turn, interferes with the entire career self-management process. Certain person inputs, such as genetic predispositions, abilities (or disabilities), and physical health, and contextual affordances can influence individual career management to a large extent reflecting a socially constructed reality that apparently runs in the background but yet, powerfully impacts self-efficacy and outcome expectations through the mediating role of learning experiences (Lent, 2013b). At times, this can cause misleading implications for individual career management based on a skewed understanding of career-related interests, goals, and choices to be "right or wrong" for certain types of people (Lent, 2013b).

Organisational career management

In this section, we will discuss organisational career management. To begin with, we address the prevalence of common age stereotypes as barriers of career management. This is followed by empirical findings on age-related differences at work. Finally, we will highlight career management strategies and practices for human resource management that help guiding career management over the life-span.

Age stereotypes as barriers of organisational career management

Workers' age is a mainly visible attribute referring to an important and often automatic evaluation of others such as supervisors or colleagues. This evaluative process is influenced by age stereotypes, which imply positive or negative attitudes towards certain age groups (i.e., younger vs. older workers; Fasbender in press). Usually, the prevalence of age stereotypes at work is in favor of younger over older workers in most highly developed countries, in line with a strong general youth centeredness in Western countries (Zacher, 2015). In contrast, being old is often associated with negative evaluations at work, such as decreasing performance, declining physical capabilities and health, dependency on other people and financial burden to the organisation (Zacher, 2015), resulting in less organisational support for older workers' careers (Shore et al., 2009). However, most of these older workers' myths have been empirically shown to be untrue and for some of them the opposite has been found to be true (Fasbender, in press; Hertel, van der Heijden, de Lange, & Deller, 2013; Ng & Feldman, 2012).

Independent of their validity, age stereotypes can lead to age discrimination at work hindering organisational career management with negative consequences for the affected workers but also for the organisation as a whole (Fasbender in press). There are different mechanisms of transferring age stereotypes into discriminatory behaviour at work. On the one hand,

managerial decisions about career opportunities and rewards might be blurred reducing group performance and organisational success (Hertel & Zacher in press). On the other hand, age stereotypes are likely to be believed by the older workers themselves, leading to self-fulfilling prophecies, which, in turn, strengthen age stereotypes as a vicious circle. Research has shown that beliefs of older workers either buffer or reinforce certain behaviours. For instance, Greller and Stroh (2004) indicated that negative stereotypes about older workers' development abilities are likely to impede taking roles and learning in different environments. Further, Gaillard and Desmette (2008) found that a strong identification with being an 'old worker' shapes early workforce exit intentions and psychological detachment from work. Yet, another study revealed that managers' favourable beliefs about older workers buffered the negative relationship between age and training and development willingness (Van Vianen, Dalhoeven & De Pater, 2011), reflecting the importance of handling age stereotypes in organisational career management.

As a result, understanding and dealing with age stereotypes at work becomes a major task for mangers and human resource professionals in organisational career management. It is a necessary to critically challenge prevalent age stereotypes and implement processes and procedures to impede discriminatory behaviour at the workplace in order to manage an increasingly age diverse workforce and create an asset rather than a liability for the organisation.

Empirical findings on age-related differences

After describing the prevalence of common age stereotypes as barriers of career management, it is also relevant to distinguish stereotypes from empirical findings. In the following, we, therefore, introduce different domains relevant for organisational career management. The following summaries are adopted from Hertel & Zacher (in press).

Cognitive abilities. Ever since the evolving of research in the field of organisational psychology, cognitive abilities have received plenty of attention due its importance for the work context (e.g., Hertel & Zacher, in press; Müller et al., 2015; Salthouse, 2012). With regard to career management over the life-span, cognitive abilities can be distinguished in *fluid intelligence* (i.e., abstract reasoning, problem solving, and working memory) and *crystallized intelligence* (i.e., general knowledge, verbal compression and vocabulary) (Hertel & Zacher in press). Research using cross-sectional data shows that crystallized intelligence is rather stable or increases over the work-life-span, while fluid intelligence decreases with age after its peak in the early-20s (Verhaeghen & Salthouse, 1997). A recent study by Klein, Dilchert, Ones, and Dages (2015), for instance, revealed that older executives achieved higher scores on verbal ability (i.e., crystallized intelligence) but lower on figural and inductive reasoning (i.e., fluid intelligence) than their younger counterparts. Further, research using longitudinal data shows that the decline of fluid intelligence starts at a later point of time (around the age of 60) but is more pronounced in later years (Schaie, 2012). However, results need to be applied with caution to organisational settings as general improvements of cognitive abilities appeared across different birth cohorts (i.e., the "Flynn effect") undermining the role of age-related differences (Hertel & Zacher in press). In addition, sociocultural changes are assumed to further increase the cognitive abilities of (younger and) older workers (Gerstorf, Ram, Hoppmann, Willis, & Schaie, 2011; Salthouse, 2015; Skirbekk, Stonawski, Bonsang, & Staudinger, 2013).

Physical capabilities and occupational health. Generally, becoming older goes along with declining physical capabilities (e.g., cardiovascular and respiratory functions, immune response, muscle function, neurological function, and sensory function) that vary to a large extent between people (Maertens, Putter, Chen, Diehl, & Huang, 2012). Health, however,

implies more than physical capabilities, it is a multidimensional concept that has been defined as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" by the World Health Organisation (1948: 28). Further, during the aging process people develop strategies to deal with their age-related changes, namely the *selection* of high priority goals resulting in personal control and satisfaction, the *optimization* of remaining skills and abilities enhancing life, and the *compensation* of experienced cognitive or physical losses by applying personal strategies and using technological resources (Baltes & Baltes, 1990). From an occupational perspective, a recent meta-analysis by Ng and Feldman (2013) revealed that employee age is only partly related to health supporting the selection, optimization, and compensation model (SOC; Baltes & Baltes, 1990). Employee age has been found to be positively related to objective measures of physical health including blood pressure ($\rho = .34$), body mass index ($\rho = .21$), cholesterol level ($\rho = .20$), and self-reported measures of muscle pain ($\rho = .14$) and insomnia ($\rho = .12$). However, employee age has been found to be unrelated to subjective physical health ($\rho = .00$). Further, employee age has been found to be negatively related to measures of mental health including anger ($\rho = -.15$), fatigue ($\rho = -.10$), irritation ($\rho = -.09$), negative mood ($\rho = -.10$), and low positive mood ($\rho = -.08$). The results highlight that it is important to focus on coping strategies for age-related changes in occupational health as part of organisational career management.

Socio-emotional and self-regulation skills. Besides cognitive and physical capabilities, socio-emotional and self-regulation skills are highly relevant for career management and positive work outcomes. Overall, research revealed that socio-emotional skills increase with higher age (Blanchard-Fields, 2007). As such, older people tend to process information gathered from positive emotions more deeply than information from negative emotions (Löckenhoff & Carstensen, 2007). Further, older people appear to be less affected by social conflict situations, being more faithful and forgiving, and also applying a broader range of

emotion-regulation strategies, which, in turn, leads to advanced self-regulation skills and helps maintaining well-functioning social relationships at work (Scheibe & Zacher, 2013). A recent study, for instance, revealed that age-related gains in self-regulation skills buffer negative effects of intrapersonal conflicts on work motivation (Thielgen, Krumm & Hertel, 2015). Further, self-regulation skills support active stress coping strategies at work (Hertel & Zacher in press), which, in turn, facilitate positive work outcomes.

Work motivation. In addition to people's skills and abilities, their work motivation is a central factor for the work context. Often lacking skills can be compensated with high levels of work motivation and related job attitudes (e.g., job involvement or organisational identification) as younger and older workers hardly work at their maximum (Hertel & Zacher in press). In contrast to the common stereotypes, a meta-analysis revealed that work motivation is rather positively related to employee age ($\rho = .11$; Ng & Feldman, 2012), while training motivation seems to be negatively related with employee age ($\rho = -.05$; Ng & Feldman, 2012). Similar results can be found from another meta-analysis investigating the relationship between age and work-related motives. The findings indicate that older people tend to have lower growth motives ($\rho = -.14$), security motives ($\rho = -.08$), and extrinsic motives ($\rho = -.10$) but higher intrinsic motives ($\rho = .07$) to work compared to their younger counterparts (Kooij, De Lange, Jansen, Kanfer, & Dikkers, 2011). In addition to work motivation, research revealed positive relationships between employee age and relevant job attitudes. For example, older workers have been found to report higher affective commitment ($\rho = .24$), job involvement ($\rho = .25$), interpersonal trust ($\rho = .17$), loyalty ($\rho = .21$), and organisational identification ($\rho = .20$) than their younger colleagues (Ng & Feldman, 2010). Summarizing the empirical findings on age-related differences with regard to work motivation, older workers appear to have meaningful strengths compared to their younger colleagues. Thus, older workers appear to have higher overall work motivation (in particular

intrinsic motivation) and related job attitudes (such as job involvement and organisational identification), while younger workers appear to be motivated by learning and development outcomes at work (such as training motivation or growth motives).

Work performance. In fact, work performance is a highly relevant factor to be considered for organisational career management. As work performance can been seen as function of abilities, skills, and motivation, it is closely related to the previous introduced findings on age-related differences. Over the last three decades, four different meta-analyses have countered the pervasive stereotype that older workers perform worse than younger workers (i.e., McEvoy & Cascio, 1989; Ng & Feldman, 2008; Sturman, 2003; Waldman & Avolio, 1986). Taken together, the empirical findings suggest that employee age and work performance are largely unrelated. The most recent meta-analysis from Ng and Feldman (2008) has analyzed the age-performance relationship with respect to 10 different dimensions. While employee age has been found to be largely unrelated with creativity, performance in training programs, and core task performance, small positive relationships were identified for general organisational citizenship behaviour (external-rated, $\rho = .08$) and safety performance (self-rated, $\rho = .10$). Further, negative relationships have been identified for general counterproductive work behaviour (external rated, $\rho = -12$), workplace aggression (self-rated, $\rho = -.08$), on-the-job substance use (self-rated, $\rho = -.07$), tardiness (external-rated, $\rho = -.28$), and absenteeism (objective measures, $\rho = -.26$). Even though, most effect sizes were rather small or statistically non-significant, older workers seem to perform rather well compared to younger workers. However, it is important to focus on the underlying mechanisms and intra individual change over time. It could be assumed that the zero relationships are due to compensation of gains and losses over the life-span. For instance, the decline in fluid intelligence could be compensated with higher levels of conscientiousness, which, taken together, appears to have no effect on the overall work performance (Hertel & Zacher in

press). Therefore, it is highly relevant to consider the underlying process of work performance and its changing resources (e.g., personal characteristics such as abilities, skills, and motivation) for organisational career management.

Career management strategies and practices for human resource management

In order to motivate and retain workers of all age groups, and to maintain their work ability over the life-span, organisations can support individual career management by focusing on age-related strength and potentials, while compensating for age-related weaknesses (Hertel & Zacher in press). At the same time, it is important to prevent age discrimination during the entire employment process and organisational functioning. In the following, we outline suggestions for evidence-based career management strategies and practices for human resource management as part of organisational career management.

Selection and placement. To begin with, organisations should critically reflect whether their selection and placement procedures allow employees' career development over the life-span. In order to reduce age discrimination at work, accurate job specification, tasks analyses, and person specification should underpin personnel decisions about selection and placement of older and younger people at work (Warr, 2001). Keeping the focus rather on relevant job-related attributes rather than on stereotyped judgements facilitates transparency about career development opportunities leading to higher levels of job satisfaction and well-being, which, in turn, increase organisational success. Also, recruitment advertisements should be created in a non-discriminatory way attracting both younger and older workers. At the same time, decision-makers (including human resource professionals as well as line managers) should be reminded that turnover rates are lower among older than among younger employees (Warr, 2001). Further, recruitment messages and sources should be chosen along the preferences and search behaviours of people from different age groups (Hertel & Zacher in press). For

example, communicating which strengths of younger and older workers are valued in the organisation can help attracting and building an age-diverse workforce. Also, it is recommended to ensure unbiased selection and placement procedures, which do not only take the quantity but also the quality of work experiences into account, relating decisions to concrete abilities, knowledge, and skills rather than on chronological age (Naegele & Walker, 2011). Further, organisational performance measurement and reward systems need to involve both younger and older workers' strength and weaknesses. As such, implementing formal procedures and objective performance indicators may help to prevent age bias. Also, regular diversity training could be implemented as they can reduce age stereotypes, team conflicts and enhance innovation in age diverse work teams (Wegge et al., 2012).

Job characteristics (re-)design. Organisations should design or re-design job characteristics to enable employees' career development over the life-span. To begin with, support systems could be implemented in order to compensate age-related decline relevant for the work context. For instance, robotics and automation technologies could help to compensate declining physical capabilities (e.g., to reduce muscle pain). Also, technological support (e.g., intelligent personal assistant and knowledge navigator based on voice recognition) could be used to compensate declining cognitive abilities (e.g., working memory). With regard to motivational job characteristics, research revealed that younger workers particularly benefit from feedback and task variety, while older workers prefer autonomy allowing them to demonstrate and pass on their experience, knowledge, and skills (Truxillo, Cadiz, Rineer, Zaniboni, & Fraccaroli, 2012; Zaniboni, Truxillo, & Fraccaroli, 2013). Further, job characteristic design is particularly relevant for age diverse teams. Research indicated that age diverse teams tend to perform well when working on complex tasks, while having more physical health issues when working on routine tasks (Wegge et al., 2008). Also, relevant for the performance of age diverse teams are leaders that hold positive expectations to their team

members and inspire, stimulate, and empower them to perform well (i.e., transformational leadership). Building a common sense of identity (rather than seeing younger and older workers as in- and outgroup) can help to increase team performance (Kearney & Gebert, 2009). Therefore, appointing leaders that show transformational qualities or implementing effective training on transformational leadership may support positive outcomes related to organisational career management over the life-span.

Personnel maintenance and development. Continuing learning is an essential element of organisational career management, in particular in times of rapid technological and economical changes. To begin with, it is important to note that perceived "maintenance practices" (i.e., practices that help maintaining work performance and well-being at work) have been found to be more efficient for older workers, while perceived "development practices" (i.e., practices that help developing work-performance and organisational functioning) seem to work better for younger workers with regard to relevant job attitudes (Kooij, Jansen, Dikkers, & De Lange, 2010). However, successfully managing careers across different age groups requires differentiated maintenance and development practices that are absorbed by both younger and older workers (Hertel & Zacher in press). Addressing this issue, differentiated feedback mechanism could be applied in order to reach out different age groups. As such, research revealed that younger workers react more positively on relevant, specific, and detailed feedback, while older workers react more positively on considerate and favourable feedback (Wang, Burlacu, Truxillo, James, & Yao, 2015). Further, it is important that organisations offer equal opportunities for continuous learning, maintenance, and development, as well as career progression, transferals, and promotions (Naegele & Walker, 2011). In this regard, career development does not necessarily refer to vertical career moves (i.e., moving up the hierarchy), but also to horizontal career moves, such as becoming a mentor or taking up an organisational ambassador role (Hertel & Zacher in press).

Organisational culture. Finally, shaping an age-sensitive and diversity-friendly organisational culture can be seen as the basis for organisational career management. The deeply-rooted beliefs, norms, and values that the members of an organisation share should be free of negative age stereotypes towards both younger and older workers (Staudinger, 2015). Organisations differ to a large extent in their favorability of different age groups. Research suggests that the different perceptions organisations hold towards their younger and older workers are influenced by various stakeholders, in particular their top managers (Zacher & Gielnik, 2014). It is likely that managers' individual age stereotypes are passed over to employees as a trickle-down process (Hertel & Zacher in press; Rosing & Jungmann, 2015). Therefore, it is important to refine top managers' attitudes towards age-sensitive and diversity-friendly concepts, steering an organisational culture that prevents age discrimination at work. In addition, supervisors should encourage and recognize people of different age groups given that these behaviours enhance older employees' work performance and well-being (Wegge et al., 2012; Zacher, Clark, Anderson, & Ayoko, 2015). Further, research revealed that age-inclusive organisational cultures have positive effects on organisational performance and collective turnover intentions through higher levels of affective commitment and social exchange perceptions (Boehm, Kunze, & Bruch, 2014; Kunze, Boehm, & Bruch, 2011). Hence, implementing, maintaining, and refining an age-sensitive and diversity-friendly organisational culture may facilitate organisational career management.

Future research directions

In this section, we offer directions for future research based on the review of literature on individual and organisational career management over the life-span. First, more research is needed with regard to the later stages of career development. This is particularly important against the background of global population aging and the resulting extension of working

lives. While a critical mass of research has mainly focused on careers of younger people (Lytle et al., 2015), it is essential to investigate career management over the life-span. As such, research needs to address the interests and strengths of different age groups, including middle-aged and older people in understanding both individual and organisational career management. It is relevant to acknowledge that age might be a proxy but not an explanatory variable in itself for career-related behaviour and changes during the life cycle. Research should, therefore, consider age-related differences and mediating mechanisms, such as cognitive abilities, physical capabilities and occupational health, socio-emotional and self-regulation skills, and work motivation in exploring long-term career development. Simultaneously, research needs to pay heed to interactions between personal factors (i.e., internal capabilities such cognitive, emotional, and physical resources) and environmental factors (i.e., external resources and the surrounding conditions) in addressing career management over the life-span.

Second, research should account for measurement issues and respect alternatives to cross-sectional research designs. In order to capture career management from a life-span perspective typically longitudinal data are preferable. Although there are a range of existing longitudinal data sets covering either career issues often in terms of labour market participation (e.g., the European Labour Force Survey) or developmental aspects of aging (e.g., the Survey of Health, Ageing and Retirement in Europe), it is necessary to combine different approaches that monitor individual and organisational strategies in managing careers over the life-span. As such, collective research attempts may be able to capture career patterns and changes from entry to (permanent) exit of workforce and community. Alternatively, research could gather career history data, including retrospective information about each career move. Although such an undertaking is not the ideal approach for behavioural research, it could be helpful to add context when understanding career management for current generations at work. Further, research should take the dynamics of

career management into account by investigating curve-linear patterns and changes over time (e.g., applying growth-curve and change modeling in analyzing the data).

Third, research should differentiate between specific occupations and industries in exploring individual and organisational career management. Previous research has often examined career patterns of knowledge, managerial and professional workers (e.g., Hirschi & Valero, 2015; Lyons et al., 2015; Zellweger. Seiger & Halter, 2011). Yet, it would be intriguing to understand to what extent the effectiveness of individual and organisational career management strategies varies among different occupations and industries, in particular in comparing blue and white collar workers. Further, it would be interesting to consider the cultural background in which career management over the life-span takes place. Cultural differences (e.g., individualism–collectivism, hierarchy–equality) may lead to different perceptions of younger and older workers (Marcus & Fritzsche, 2016), which in turn is likely to influence individual and organisational career management strategies and their effectiveness. Future research needs to address these issues by applying other organisational and cultural settings (e.g., cross-organisational and cross-cultural comparisons over time).

Conclusion

Against the background of extending working lives, this chapter discussed career management over the life-span from both the individual and the organisational perspective. We introduced and differentiated concepts of age, generation(s), and career development over the life-span as a theoretical foundation for career management. Individual career management was introduced relying on social cognitive career theory, which highlights the individual as a proactive agent for his or her career development. Further, we discussed relevant proximal and distal antecedents of individual career management. Organisational career management was introduced by differentiating and comparing common stereotypes and

empirical findings on age-related differences at work. Having considered differences in cognitive abilities, physical capabilities and health, socio-emotional and self-regulation skills, work motivation, and work performance, we outlined evidence-based career management strategies and practices for human resource management linking individuals' interests, strengths, and potentials to organisational functioning. Based on the literature review, we provided future research directions. As a result, we conclude that career management over the life-span is not a one-way street but a dynamic set of opportunities for both individuals and organisations to maximize their interests in times of global population aging.

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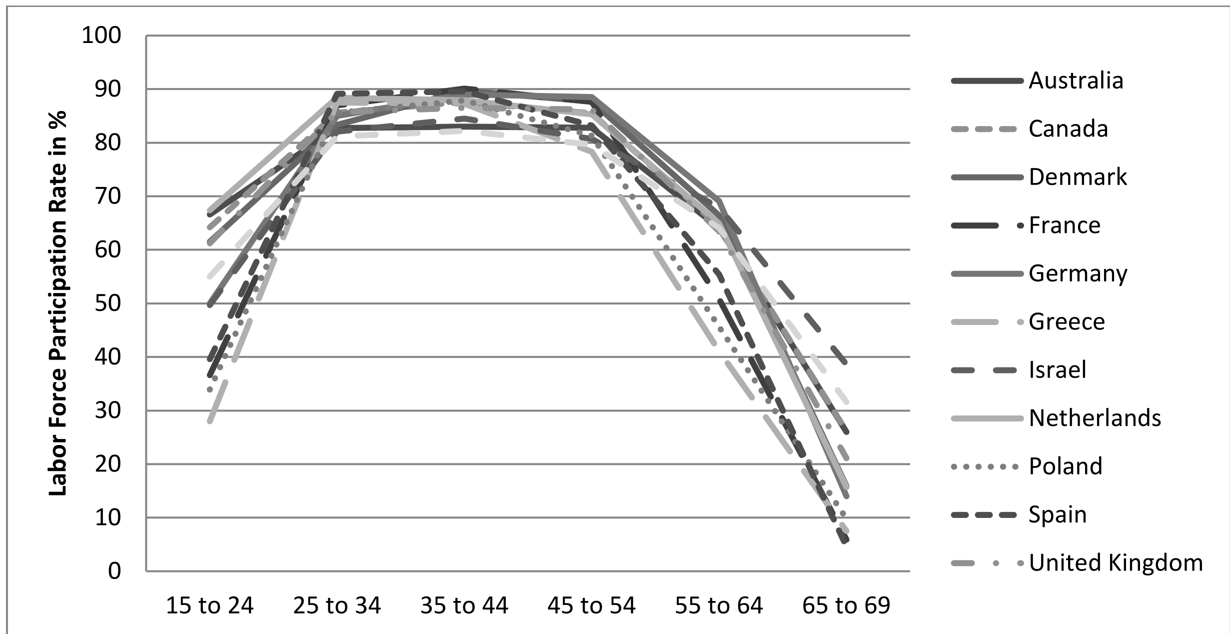

Figure X.1: Labour Force participation rate across different age groups in 2014. Data Source: (OECD 2015)

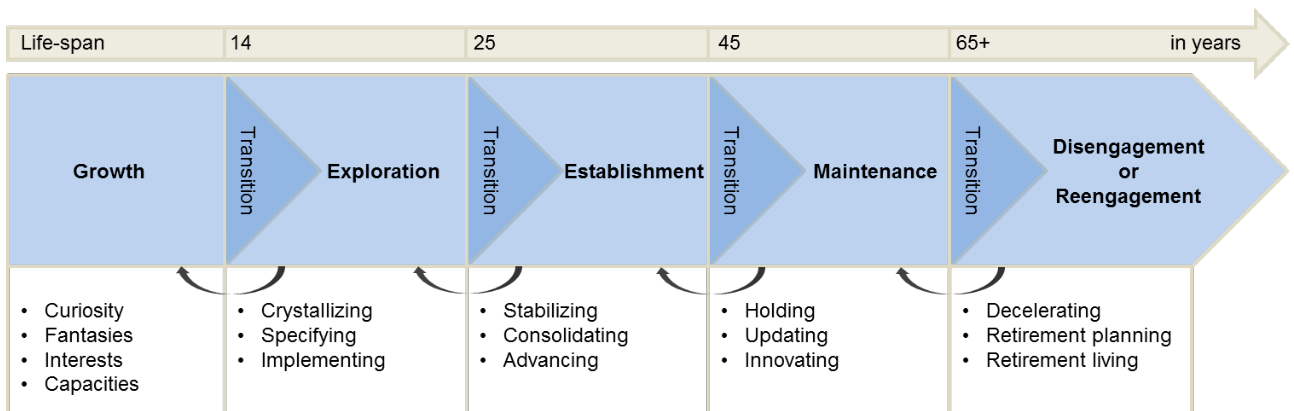

Figure X.2: Career development over the life-span

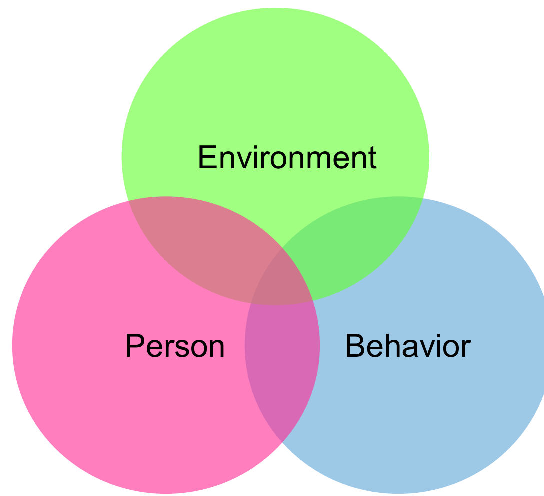

Figure X.3: Triadic reciprocity between person, environment, and behaviour

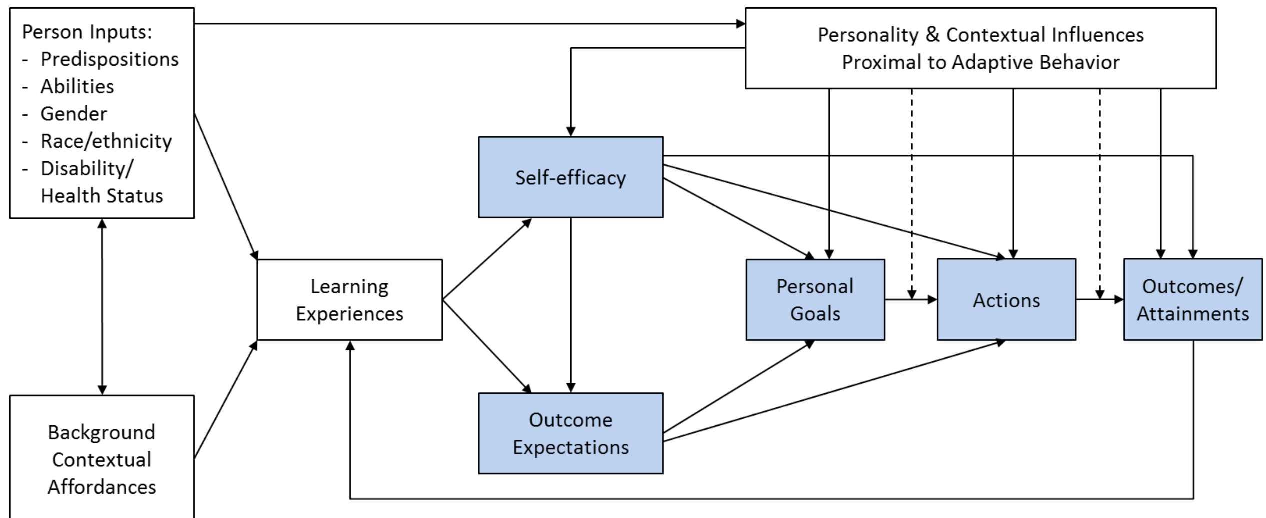

Figure X.4: Career self-management process. Source: Adapted from: Toward a unifying social cognitive theory of career and academic interest, choice, and performance. From R.W. Lent, S. D. Brown, & G. Hackett, 1994, Journal of Vocational Behavioral, 45, p. 93. Copyright 1993 by R. W. Lent, S. D. Brown, & G. Hackett. Reprinted with permission.

Note: Direct effects are indicated with solid lines; moderator effects (where a given variable strengthens or weakens the relationship between two other variables) are indicated in dashed lines.