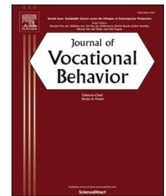
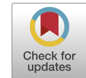
Journal of Vocational Behavior 126 (2021) 103526

Contents lists available at ScienceDirect

Journal of Vocational Behavior

journal homepage: www.elsevier.com/locate/jvb





Going full circle: Integrating research on career adaptation and proactivity☆

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ARTICLE INFO

Keywords:
Career adaptability
Career proactivity
Adapting behaviors
Adapting
Adaptive
Adaptation
Proactive behavior
Person-environment fit behavior
Self-regulation

ABSTRACT

Career adaptability as a resource and adaptation as a process are essential concepts in career research and counseling, inspired by and building on a long tradition in vocational psychology. Career proactivity, a sub-facet of proactive work behavior in general, comes from industrial- and organizational psychology and is grounded in the literature on self-regulation. The current paper aims to compare these literatures, highlighting communalities and differences in their conceptual backgrounds, implied assumptions, and behaviors studied. Given how these literatures complement rather than contradict one another, we then integrate both literatures into a common framework based on the Rubicon model, a self-regulatory model of action phases. With this, we strive to highlight differences and communalities, potential blind spots and areas where either literature may learn from the other as well as directions for future research that might be beneficial for both literatures and the study of career related action overall.

> *The future is not a result of choices among alternative paths offered by the present, but a place that is created—created first in the mind and will, created next in activity. The future is not some place we are going to, but one we are creating. The paths are not to be found, but made, and the activity of making them changes both the maker and the destination.*
>
> —John Homer Schaar

This quote (taken from Strauss et al., 2012) highlights central processes identified in research on both career adaptation and proactivity, as well as the objectives of our conceptual review. Both research streams, on career adaptation (Savickas, 2005, 2013) and proactive career behaviors (Parker et al., 2010; Strauss et al., 2012), offer impressive research paths full of conceptual insights and practical impact. At points, both streams overlap in terms of arguments or variables studied. At other points, they differ and even stand at odds – at least at first sight – regarding their origins, assumptions, and objectives. And yet, by creating an integrative whole from these two research streams, we hope to offer an outlook that extends and thus also changes both these research streams and their destinations.

The current paper outlines the fundamental assumptions of both research streams, compares them, and integrates them into a self-regulatory framework on proactivity and adaptation in the context of peoples' careers. For this, we build on the Rubicon model (Achtziger & Gollwitzer, 2018; Heckhausen & Gollwitzer, 1987), which argues that actions are subject to different phases – with the overt action being only one aspect of the whole action cycle. First, in the pre-decisional phase, different options are explored and

☆ This research was funded by a grant from the German Research Foundation (ORA-plus project KL 2366/2-1).
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https://doi.org/10.1016/j.jvb.2020.103526
Received 19 February 2020; Received in revised form 16 August 2020; Accepted 10 December 2020
Available online 20 April 2021
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deliberated until people feel ready to make a decision. Heckhausen and Gollwitzer (1987) liken this decision to Julius Caesar crossing the river Rubicon together with his army and thus declaring war on Rome: A point of no return where general and broad motivation ('what do I want?') turns into specific volition ('how can I achieve what I want?'). Then follows a volitional period: a post-decisional yet pre-action phase of planning to reach one's goal, and then the action phase where plans are realized. Post-action, the actor's mind opens up to reflect on their behavior, successes and failures, to make sense of it, which serves as input for the next cycle of pre-decisional deliberation, decision, post-decisional planning, action, and reflection.

With this, this paper contributes to the research streams on career adaptation and proactive career behavior in three ways. First, by offering a integrative comparison of these research streams, we identify communalities and differences that complement and inform rather than contradict one another, for example regarding the conceptual backgrounds, the in- versus extrinsic motivation and emotional state that motivate career behavior, as well as the behavioral focus and type of change that people aim to achieve. This is relevant for research on career adaptation, which sometimes appears more reactive than warranted and which has a tendency to stop following people past the planning and into the actual action-stage. Also, while many predictors of career adapting are well known, others are as-of-now more implied rather than clearly specified. This is particularly true for people's affective – or in the words of literature on proactive behavior "energized to" – states. Yet, the comparison is also relevant for research on career proactivity. In their model on proactive behavior, Parker et al. (2010) suggest three types of motivational states that prompt proactive behavior: "can do", "reason to" and "energized to". This thinking may benefit from the concept of career adaptability as a contextualized "can-do" state and from considering not only intrinsic but also more extrinsic motivational states as valid "reasons to" engage in the respective behaviors.

Second, we integrate both research streams into a self-regulatory cycle of action phases. This not only solves some misalignments between these research streams, but offers insights for both literatures. For research on career adaptation, it highlights behaviors post career counseling and planning that are relevant to pursue, and also offers an alternative perspective on integrating the agent and author levels of career construction theory. That is, career construction theory (Savickas, 2005, 2013) proposes people to develop different perspectives on their careers over their life-times, first as actors following pre-designed scripts, then as agents developing and following their own personal goals, and finally as authors who reflect and make sense of their careers. Seen from a self-regulatory perspective, the current paper suggests in what type of situations (post-action) and why (reflection on past actions and success in

Table 1
Comparison of the literatures on career adaptation and career proactivity.

	Career Adaptation	*both*	*Career Proactivity*
Background and Philosophical Approach			
Original discipline	Vocational psychology		Industrial- and organizational psychology
Theory developm., research approach	First bottom-up / inductive: qualitative case studies; Now largely quantitative and deductive research with advent of suitable scales		Top-down / deductive: seeking principles generalizing across domains based on models of self-regulation
Practical grounding	Career counseling		Work design
Historic and theoretical foundations	Social constructivism: careers are deeply subjective, we make sense and construct meaning of our careers. Vocational maturity (Super & Knasel, 1981) and life-span-life-space (Super, 1980): the many roles in our lives require constant cycles of adaptation		Part of research on proactive behavior in general (Parker et al., 2010; Parker & Collins, 2010). The domain (careers) is of less interest than the general principles driving proactive behavior
Therein: phases	exploration, establishment, management, dis-/reengagement across the life cycle and whenever meeting new career task (Super, 1980)		self-regulatory action phases of orientation, decision, planning, action, reflection (Gollwitzer, 1990)
Focus	Person as central starting point, seeking methods that help clients navigate career tasks, transitions, and traumas		Largely variable-centered, addressing conditions and work designs that stimulate proactive behaviors
Target person	Career actors from adolescence to retirement		Employed workers
View on self	Mostly stable (self-exploration serves to identify strengths, weaknesses, preferences, not to change them)		Malleable
… on environment		Malleable – and if not, then people may seek out a more suitable environment	
Re- versus Proactive Nature of Behavior			
Situations	Tasks, transitions, and traumas, often of external origin → change is pending, decisions are needed	Preparing for & during transitions	Relative stability, examining when / which workers will self-initiate career-related behavior
Nature of behavior	Reactive, but also proactive		Proactive
Thought on costs		Both see effort as costly, question whether benefits outweigh costs. Behavior is not enacted without (in- or external) reason.	
Valence		Positive and agentic (i.e., high arousal) affective tone, optimistic future outlook	
	Implicit: Optimism is part of career concern, career curiosity implies sense of opportunities worth approaching		Explicit: Activated positive affect at core of 'energized to' motivational state
Behaviors (& stage) addressed	1. exploration (pre-decisional) 2. deciding (decision)	3. planning (pre-action)	4. striving / implementing a plan (e.g., pursuing education), 5. reflection (e.g., mentoring)

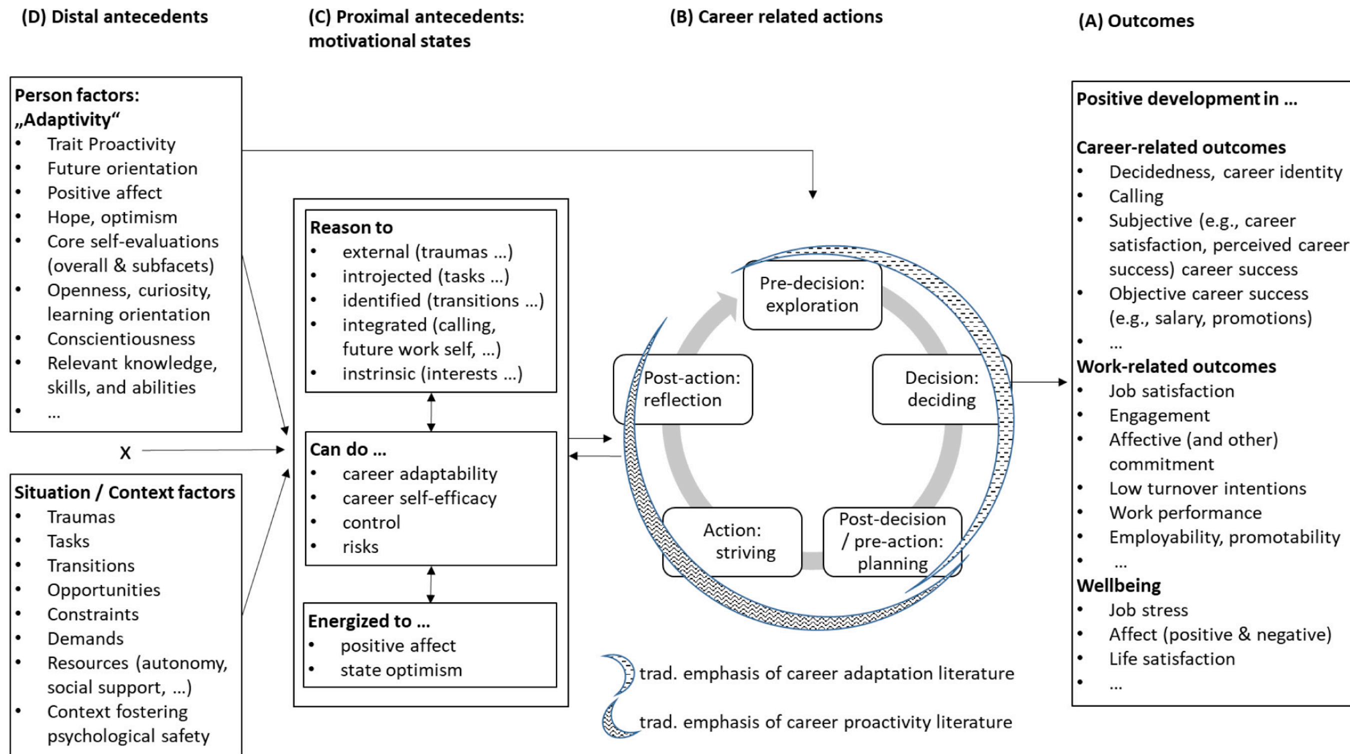

Fig. 1. An integrative model of career adaptation and proactivity.

preparation of future decisions) people may switch between agent and author perspectives. For research on career proactivity, this perspective shows the benefits of not only focusing on the volitional side of action (i.e., planning and enacting), but also on the motivational side, that is, the role of sense-making and of exploring the breadth of opportunities before deciding to pursue any proactive option.

Third, by drawing on the literature of self-regulation, we further integrate insights from careers' research on career stages into a more fundamental framework, which in turn justifies the inclusion of certain dimensions into the career-adaptation framework while excluding others. Further, research on self-regulation suggests further behaviors up to now unstudied in either research on career adaptation or proactivity that will be relevant in successfully managing one's career, thus offering new insights for science and practice.

In the following, we map out our methodological approach when conducting our review and then the conceptual lands as we know it (i.e., outline "choices among alternative paths offered by the present") by recapitulating tenets underlying career adaptation and proactivity and then discussing their similarities and differences (Table 1). Next, we integrate them into an overarching self-regulatory framework (see Fig. 1; "creating a new future"). Here, we outline the outcomes of both streams, followed by the career-related actions leading to these outcomes, and proximal and distant antecedents. Finally, we present directions for future research and practical implications derived from the integrated framework.

1. Method

1.1. Identification of literature and selection criteria

We conducted a conceptual review of the literature streams on career adaptation and proactive career behaviors from which we built an integrated conceptual framework. For this, we updated our own prior reading with an up-to-date literature search. First, articles were identified through a keyword search in the database Web of Science. Main search terms were "career" in combination with either: "adaptability", "adaptation", "behavior", "proactivity", "response", and "resource". Further, we elaborated these search terms by a combination of similar words and synonyms (Fink, 2014). In addition, we used "planning", "decision making", "exploration", "problem solving" as synonyms, given these behaviors' prominent roles in career adaptation research. The combination of search terms were implemented with AND, whereas synonyms were connected with OR. We allowed the extension or the plural of search terms by using an asterisk behind some search terms (e.g., resource*). Second, we used complementary strategies to identify additional relevant literature, in particular, backward searching other reviews or meta-analyses (e.g., Jiang et al., 2019; Rudolph et al., 2017) and forward searching early work (Harari et al., 2020).

Empirical studies had to meet the following selection criteria: Studies had to address career adaptation or proactive career behaviors in a context related to work, including the school-to-work transition. Publications needed to be written in English and published until January 2020 in an indexed outlet. Thus, unpublished manuscripts or "grey" literature that is not available by a traditional publisher (e.g., preprints) are not included. Finally, it is important to highlight that our review is not comprehensive, meaning that publications were included only if they add incremental meaning with regard to the integration of career adaptability and proactivity. This may exclude studies with similar content.

1.2. Data analysis

In line with our goal to provide a conceptual rather than an empirical review (for the latter, see for example Jiang et al., 2019; Parker & Bindl, 2017; Rudolph et al., 2019), we integrated findings in narrative, rather than in a statistical form. Thereby, we aimed to synthesize the extant literature streams on career adaptation and proactive career behaviors into an integrated conceptual framework that provides guidelines for future research. When doing this, we paid particular attention to major conceptual works that present the dominant thinking in the literatures on career adaptation and proactive (career) behavior and that have been particularly well cited since, suggesting their own impact on subsequent research. Not surprisingly to insiders to these literatures, these were particularly the works of Savickas (e.g., 2005, 2013) on career construction theory and of Parker and colleagues (e.g., Parker et al., 2010; Parker & Bindl, 2017; Parker & Collins, 2010) on proactive career behavior. A comparison of these literatures further revealed how they tend to address somewhat different types of career actions. Given both literatures' roots in different yet essentially similar phase models, we further resorted to the Rubicon model of action phases (Achtziger & Gollwitzer, 2018; Heckhausen & Gollwitzer, 1987) to address these differences and to integrate their complementary behaviors into a self-regulatory circle of career related activities.

2. "Choices among alternative paths offered by the present": the underlying concepts

2.1. Career adaptation

Career adaptability and adaptation are essential in vocational psychology and career counseling and have been described (Savickas, 2005, 2013; Super & Knasel, 1981), studied (e.g., Rudolph, Lavigne, & Zacher, 2017), and recommended (Brown & Lent, 2005; Lent & Brown, 2013; Spokane, 1991) by practitioners and scientists alike for decades. Yet, with their long history, the terms have also suffered from construct dilution and an "unfortunate lack of coherence in the career literature where the same or similar terms are used to denote variables that are theoretically and empirically quite different" (Hirschi et al., 2015, p. 2).

Career adaptation denotes a specific sub-theme in Savickas' (2005, 2013) career construction theory. Embedding multiple careers

theories into a social constructivist meta-theory, Savickas argues that during adolescence and adulthood, people develop three perspectives toward their careers: first as actors, then as agents, and finally as authors. The *actor* perspective implies following given scripts handed down by guides and role models. Yet over time, people self-extend and develop their own goals to strive for as active *agents*. Last, people become *authors* of their careers, reflecting on, making sense of, and explaining their autobiography as to pattern their experiences into a meaningful career story.

Career adaptation is embedded in the "people as agents" perspective. Agency becomes critical when facing vocational development *tasks* (age-graded normative transitions, e.g. from school to work), occupational *transitions* (which may or may not be planned and/or wanted, e.g., job changes), or work *traumas* (unpredictable and unwanted, e.g., job loss). In meeting these tasks, transitions, and traumas, people will likely fare better if they *adapt*, that is, if they explore their own skills and desires as well as the career options available for them, take responsibility for and make their own decisions, develop good plans on how to implement these decisions, and believe in their ability to overcome the obstacles that they will face along the way (Savickas, 2013). Like any behavior, however, also adapting is a matter of the person's respective motivation and capabilities (Campbell, 1990). In the context of career adaptation, Savickas (2013) has conceptualized these as peoples' adaptivity and adaptability.

Adaptivity denotes personal characteristics of flexibility and the general willingness to meet career related tasks, transitions, and traumas with fitting responses. Most studied are characteristics such as trait levels of proactivity, future orientation, hope and optimism, core self-evaluations and self-esteem, as well as higher scores on the Big Five personality dimensions and cognitive ability (Rudolph, Lavigne, & Zacher, 2017).

The term career *adaptability*, in turn, is used in two different ways – one narrow and 'clean', the other more encompassing of the original meaning of the term when introduced into the literature (Super & Knasel, 1981). In its narrow sense, career adaptability denotes the perceived psychosocial resources for coping with predictable and unpredictable, current and anticipated tasks, transitions and traumas (Savickas, 2005, 2013). Some authors focus on a general "tendency affecting the way an individual views his or her capacity to plan and adjust to changing career plans and work responsibilities, especially in the face of unforeseen events" (Rottinghaus et al., 2005, p. 3) and ask respondents about their perceived adaptability quite directly (e.g., "I am good at adapting to new work settings"). Career construction theory (Savickas, 2005, 2013), however, makes explicit assumptions about the nature of the relevant resources, namely: Concern, control, curiosity, and confidence. Others add a fifth dimension of cooperation (Nota et al., 2012; Nye et al., 2018). Each of these dimensions includes specific resources in the form of attitudes, beliefs, and competencies:

Career concern, according to Savickas (2005, 2013) the most important dimension, denotes a future orientation, attitudes of planfulness, a belief that it is important to prepare for tomorrow, and competencies related to planning. A lack of career concern, Savickas argues, shows in indifference or apathy regarding one's future career, a planlessness and pessimism.

Career control implies that people 'own' their career and feel and believe that they themselves are responsible for making their career decisions, besides having competencies related to career decision making. A lack of career control, in turn, would show in indecision.

Career curiosity is about inquisitive attitudes and beliefs regarding one's career and oneself as well as exploratory competences, in order to learn about oneself and one's surroundings and thus reach a good fit between the two (an idea that goes back to the foundations of vocational guidance, see Parsons, 1909, and fundamental notions of fit, e.g., Holland, 1959). A lack of career curiosity would show in naivety and unrealism regarding one‘s career related options.

Career confidence implies expecting to succeed in constructing one's career by being able to perform efficiently, solve complex problems, overcome obstacles, and learn new skills.

Career cooperation, finally, describes the interpersonal aspects of career adaptability, "one's ability to successfully interact with and work alongside others" (Nye et al., 2018, p. 552). While not part of career construction theory (Savickas, 2005, 2013) or most research on career adaptability, Nye et al. (2018) argue for the relevance of career cooperation, suggesting that the reason for its exclusion from general measures of career adaptability (i.e., the CAAS; Savickas & Porfeli, 2012) is more methodological rather than conceptually grounded.

These adaptability resources then should foster *adapting* behaviors such as career planning (concern), deciding on one's future career and the goals that one strives to pursue (control), exploring both the self and the environment (curiosity), and persisting (confidence). Here, actually, lies a historic source of confusion: When originally introduced as an alternative to the then-dominant thinking on vocational maturity (Super & Knasel, 1981), the term 'career adaptability' had been employed as an umbrella-term for exactly those behaviors that we'd now rather label 'adapting behaviors'. With researchers sometimes also calling the whole adaptation process 'career adaptability', this has caused a confusing mash of labeling that persists well past Savickas' (2005) efforts to separate resources (adaptability) from behavior (adapting). In the end, it is these active adapting behaviors which are supposed to foster positive outcomes of the adaptation process, called *adaptation results*.

2.2. Career proactivity

Being proactive is about making things happen, anticipating and preventing problems, and seizing opportunities. Studied since the 1990s (Frese et al., 1997; Seibert et al., 1999; Tharenou & Terry, 1998), proactive career behavior or person-environment fit behavior describes peoples' self-initiated and future-oriented actions intended to master and change their career circumstances (Grant & Parker, 2009; Parker et al., 2010). The goal is to enhance the fit between person and environment (Parker & Collins, 2010) via a "change in the environment and/or oneself to achieve a different future" (Parker et al., 2010, p. 828).

In theorizing about proactive behavior in general, Parker et al. (2010) argue that such behavior becomes relevant particularly in weak situations when personal predictors make a greater difference. Together and in interaction with contextual factors, individual

differences (e.g., proactive personality, a "relatively stable tendency to effect environmental change"; Batemann & Crant, 1993, p. 105) foster three motivational states: A *reason* to self-initiate the behavior, the belief that one *can* control the situation and the outcomes of one's behavior without too many costs involved, and finally feeling positively *energized* to engage in this behavior. These proactive motivational states then enable proactive goal generation and goal striving (Parker et al., 2010), which aim to change the future via changing the self and/or the situation. Drawing on models of action phases (Gollwitzer, 1990), some authors further split goal generation and striving into phases of envisioning, planning, enacting, and reflecting (Bindl et al., 2012). Envisioning implies imagining a different future and identifying avenues for change. Planning implies preparing, and enacting implies engaging in the overt behaviors to bring this future about. Reflecting serves to understand success, failure, or implications of the proactive behaviors, itself an input for subsequent envisioning, planning, and enacting.

Empirically, studies usually include planning and overt career behaviors. *Planning* (sometimes including exploration; Claes & Ruiz-Quintanilla, 1998; de Vos et al., 2009) arguably helps people to understand their career goals, and the overt behaviors help to reach these goals (Claes & Ruiz-Quintanilla, 1998; Strauss et al., 2012; de Vos et al., 2009). In line with their functional definition as self-initiated, future-oriented, and intending to master and change one's career circumstances (Grant & Parker, 2009; Parker et al., 2010), overt behaviors can be rather diverse in nature. Included in past studies – among others – are *networking* (activities to develop and maintain relationships with others who have the potential to assist them in their work or career; e.g., Ashford & Black, 1996; Claes & Ruiz-Quintanilla, 1998; Strauss et al., 2012; de Vos et al., 2009), proactive *feedback seeking* (gathering information about one's behavior, be it by directly asking for feedback on one's performance (inquiry) or by monitoring the situation and others' behavior – e.g., in order to identify criteria for rewards and promotions; e.g., Ashford & Black, 1996; Parker & Collins, 2010), *seeking consultation* (building developmentally oriented relationships to seek information, advice, or help from supervisors, colleagues, or other more experienced individuals who serve as *mentors*; Claes & Ruiz-Quintanilla, 1998; Strauss et al., 2012), or *discussing one's career aspirations* with people more knowledgeable and/or powerful in the organization (Parker & Collins, 2010). Past studies also included measures on overt job change *negotiations* re task assignments, role expectations, and job changes to ensure that the job fits one's own skills, abilities, and preferences (Ashford & Black, 1996; Parker & Collins, 2010). Research on *job crafting* (Rudolph, Katz, et al., 2017; Wang et al., 2017) and, more recently, *career crafting*, "proactive behaviors that individuals perform to self-manage their career and that are aimed at attaining optimal person-career fit" (Tims & Akkermans, 2020) equally fit that definition, particularly as these often imply voluntary (Tharenou & Terry, 1998) and particularly helpful assignments (e.g., "assumed duties or positions that will help you progress professionally"; Hirschi et al., 2014), such as *challenging assignments* (de Pater et al., 2009), and finally *skill development* activities, that is, initiatives and interventions aimed to increase the mastery of tasks involved in one's current or future job (Claes & Ruiz-Quintanilla, 1998; Strauss et al., 2012; Tharenou & Terry, 1998). That said, while this selection may look eclectic, following the functional nature of the definition of proactive career behaviors, some measures lump different activities together in common scales (e.g., on career initiatives, Seibert et al., 2001; Tharenou & Terry, 1998, or engagement, Hirschi et al., 2014) or under second order factors (Parker & Collins, 2010), suggesting that they reflect common substance. Further proactive career behaviors are also conceivable, such as job search, particularly among employed job-seekers self-initiating their search (Boswell & Gardner, 2018) and other forms of proactive career self-management (King, 2004; see also Hirschi & Koen, this issue). Each of such proactive behaviors then arguably influences important career outcomes such as promotions and career satisfaction (Seibert et al., 1999; Seibert et al., 2001) and, for those searching for a job, employment (Brown et al., 2006; Saks & Ashforth, 1999), with the overall goal being an enhanced fit between the person and their environment (Parker & Collins, 2010).

2.3. Commonalities and differences between career adaptation and proactivity

Identifying the similarities and differences between the two research streams helps to clarify the concepts and shows where they may complement or even learn from one another (see Table 1 for an overview). Most relevant for our subsequent integration are the following:

2.3.1. Re- versus proactive nature of behavior

Both research streams focus on different situations. Research on career adaptation centers on developmental tasks, transitions, and traumas, "when the self must adapt to transitions. […] when the occupational plot is lost, ruptured, halted, stalled, or silenced" (Savickas, 2013, p. 155). Research on career proactivity, in comparison, often starts from relative stability, examining the conditions and individual differences predicting who among a group of workers will self-initiate career-related behavior.

From this perspective, it may be tempting to imply that only proactive career behavior is truly proactive and self-starting (Parker et al., 2010), whereas adapting may appear more reactive in nature. We disagree. Indeed, adapting can likely be both: A reaction undertaken to address a trauma already experienced (e.g., a job loss), and a proactive behavior undertaken in anticipation of such trauma or also of less threatening tasks or transitions. When introducing the term, Super and Knasel (1981, p. 198) argued that "the word 'adaptability' … has the additional merit of being forward-looking, allowing us to see the individual as behaving proactively". Also, arguments on career adaptation share striking similarities to those on proactive coping (cf. Klehe et al., 2012), that is, future-oriented coping that tries to detect and proactively manage potential threats to one's well-being (Aspinwall & Taylor, 1997). Like career adaptation, proactive coping focusses on the effective use of resources, realistic goal setting, and on realizing a vision, rather than only evading threats (Sohl & Moyer, 2009). With this, forward looking behaviors such as envisioning a possible trauma (e.g., an inability to continue in one's line of work, as the work may become obsolete or require abilities that decline with age) and devising alternative career plans to circumvent this trauma (e.g., planning and undertaking the steps needed to change toward a more sustainable line of work) would surely fit the conceptualization of both adapting and proactive career behavior. Also empirically, trait-

level proactivity is a prime correlate of career adaptability (Rudolph, Lavigne, & Zacher, 2017) and adapting behaviors (Hirschi et al., 2015; van der Horst et al., 2017).

2.3.2. Conceptual background and research

Both research streams stem from rather different groundworks. Career adaptation is a deeply vocational topic. Rooted in social constructivism and in Super's (1980) life-span, life-space approach to careers as well as the practice of career counseling (Savickas, 2005, 2013), this literature is person-centered, treating careers as subjective phenomena and trying to identify methods that help clients navigate career tasks, transitions and traumas. Originally built inductively via qualitative research, quantitative research has advanced with the advent of suitable measures (e.g., Savickas & Porfeli, 2012; Stumpf et al., 1983) and has gained a striking momentum (Rudolph et al., 2019). Particularly the concept of career adaptability is being treated somewhat like a silver bullet worldwide not only for career related questions but also for matters pertaining to motivation, performance, stress, and overall life satisfaction (for an overview see Rudolph, Lavigne, & Zacher, 2017), and has been integrated into relevant models beyond career construction theory such as the psychology of working theory (Duffy et al., 2016), which aims to enhance our understanding of how work contributes to people's fulfillment and wellbeing. Other models, such as the social cognitive model of career self-management (Lent & Brown, 2013), integrate the behavioral side of the adaptation process, i.e., the adapting behaviors – even though these authors also do call for a somewhat more complete integration of their and Savickas' theorizing. On the critical side, however, much empirical research on career adaptation captures only subsections of the adaptation process (e.g., studies career adaptability in isolation) and/or treats adaptability like a stable and rather homogenous trait (e.g., see discussion by Fouad & Kozlowski, 2019), rather than capturing the developmental focus across time (Savickas, 2013). And while the logical sequencing of variables (adaptivity and adaptability to adapting) does largely hold empirically (Rudolph, Lavigne, & Zacher, 2017), results become less supportive on the dimension-specific level (e.g., Hirschi et al., 2015; van der Horst et al., 2017). Speaking of dimensions, as with any content model, the question of whether the dimension of career cooperation should be included as a fifth dimension in the theorizing on career adaptation – and if not, then why not, and if so, then how – still warrants further justification and empirical research. Given the power of social connections over our careers (e.g., Ng et al., 2005), this question is far from trivial.

Proactive career behavior is a subsection of proactive behavior in general (Parker et al., 2010; Parker & Collins, 2010). Theorizing is largely deducted top-down, starting from fundamental theories on self-regulation (e.g., Gollwitzer, 1990, 1999) and then seeking to identify conditions and work designs that stimulate proactive behavior by fitting into the one or the other functional category outlined in the overall modeling. Aiming for generalizable principles, much of the resulting research is published in general industrial-organizational psychology or management outlets and the thinking underlying proactive behavior in general has gained considerable tracking in diverse areas of psychology and management, even though, here, too, certain variables, such as proactive personality, have developed a life on their own and have become part of numerous theories (again including, for example, the psychology of working theory; Duffy et al., 2016). The focus on the careers domain in particular, however, could benefit from more attention, rather than being treated as just another context in which to test the generalizable principles, and particularly the longitudinal and at points disruptive nature of careers, the study of within-person variability of proactive behavior (e.g., Spurk, Volmer, et al., 2019), and possibly a more person-centered perspective would warrant attention (Sonnentag, 2017). And finally, as with career adaptation, it stands to wonder how well the rather diverse proactive career behaviors currently studied actually cover their intended domain. We hope to contribute to this question with addressing the behaviors associated with either theory from a self-regulatory framework.

2.3.3. Action phases and self-regulatory behaviors

Coming from different origins, both literatures imply quite similar phases. Some proactivity studies explicitly refer to self-regulatory action phases (e.g., Bindl et al., 2012). Models describing such phases usually start with a pre-decisional phase of orientation and exploration, until people arrive at a decision on what goals to strive for. Then follow phases of post-decisional planning and action, finalized by a phase of reflection in preparation of the next cycle of deliberation, decision, planning, action, and reflection (e.g., Achtziger & Gollwitzer, 2018). Yet also the life-span-life-space approach to careers (Super, 1980), a conceptual cornerstone leading up to career construction theory (Savickas, 2002), suggests phases of pre-decisional exploration, post-decisional establishment, management in times of relative stability, and eventual dis-/reengagement not only across the life cycle, but also when meeting each and every career task, transition, and trauma. Savickas (2013, p. 156) states that "individuals can adapt more effectively if they meet changing conditions with growing awareness and information seeking, followed by informed decision making, trial behaviors leading to a stable commitment projected forward for a certain time period, active role management, and eventually forward-looking disengagement".

In practice, both streams overlap in their focus on career planning, a post-decisional pre-action phase behavior. The difference between literatures is that research on career adaptation primarily focusses on the processes leading up to the development of such plans, whereas research on proactive career behavior usually starts with planning. That is, research on career adaptation focusses on pre-decisional exploration and deliberation, resulting in the decision making itself, and to the post-decisional planning on how to implement the decision made. Except for ensuring confidence, it is less concerned with following the decision maker through the post-transitional phases to see how well plans are implemented over months and years. In this sense, the literature on career adaptation follows the notion of the theory of planned behavior (Ajzen, 1988) that a good plan or intention and confidence in one's ability to execute such plan will suffice to actually succeed, an assumption with merits yet also disregarding the frequent mismatch between intentions and behaviors (Sheeran, 2002).

The stream on proactive career behavior in turn usually starts with career planning, covering pre-decisional exploration – if at all – as part of planning (Claes & Ruiz-Quintanilla, 1998; de Vos et al., 2009). This practice is debatable, given that exploration and planning

link only indirectly in that both reflect career engagement (Hirschi et al., 2014), while they differ in goals (gather pre-decisional information versus plan on how to reach a post-decisional goal) and focus (wide and open versus narrow and pointed). Also, the decision itself is usually not addressed in career proactivity but rather taken for granted, once the behavior is shown. Much this research focusses on overt behaviors during the action phase, with a wide array of behaviors included, but not always justifying the choice of those behaviors all that well.

Finally, one aspect relevant conceptually but hardly addressed separately in either research stream is the last action phase, the reflection of one's behavior and outcomes. Both research streams agree that reflection matters (Bindl et al., 2012; Savickas, 2013) yet empirically, this aspect of self-regulation has received comparatively little attention in the context of career proactivity and adaptation (Bindl et al., 2012). By integrating both research streams, however, we hope to fill the gaps presented in either literature and thus close the cycle and provide a more complete conceptual framework on how people may actually go about and manage anticipated or experienced changes in their careers.

3. "A place that is created": an integrative model of career adaptation and proactivity

As we hope to have shown with the above comparison, research on career adaptation and proactivity mostly complements, rather than contradicts one other, a thought that not only offers itself conceptually but has also been supported empirically (e.g., Spurk, Volmer, et al., 2019). Coming from different disciplines and traditions, these literatures offer a more encompassing view on career behavior together than either of them alone. In the following we integrate these two streams (e.g., Parker et al., 2010; Savickas, 2013), arguing that in order to bring about their aspired outcomes, it takes both types of career-related actions, which can be arranged in a self-regulatory framework from pre-decisional information seeking and deliberation, via making (informed) decisions, to post-decisional planning, managing one's goal pursuit or striving, to finally, reflection and the start of a new circle of career behaviors. The degree to which people engage in such behaviors, in turn, depends on proximal antecedents in the form of "reason to", "can do", and "energized to", and on distal antecedents located in the person, the context, or in the interaction of the two (see Fig. 1).

3.1. *Outcomes*

Research on career adaptation and proactivity has studied vastly different outcomes (e.g., Rudolph, Lavigne, & Zacher, 2017), many of which share an element of change, a state different (and ideally better) in some way than before. Not surprisingly, the most dominant type of outcomes are (a) career-related outcomes, yet increasingly, both literatures also address (b) work-related outcomes, and (c) wellbeing.

3.1.1. *Career-related outcomes*

While the literature on career adaptation tries to emancipate itself from its roots in vocational maturity (Super & Knasel, 1981), many empirical studies still address students facing the developmental task "school to work transition" and thus striving for career *decidedness*, for feeling certain about one's career decisions (cf. Osipow, 1999). Related is the outcome of developing a *career identity*, or even a *calling* regarding one's career, a sense of purpose that this is the work one was meant to do (Hall & Chandler, 2005). All of these have been successfully linked to career adaptability (Rudolph, Lavigne, & Zacher, 2017).

In the end, both research streams aim and largely succeed at predicting and fostering people's career success. Success can be objective, often operationalized via *salary* and/or *promotions*, or subjective, operationalized via outcome such as *career satisfaction* and *perceived career success* (e.g., Herrmann et al., 2015; Hirschi et al., 2014; Rudolph, Katz, et al., 2017; Rudolph, Lavigne, & Zacher, 2017; Seibert et al., 2001; Spurk, Hirschi, & Dries, 2019).

Finally, as both career adaptation and proactivity usually happen in response to or preparation for a career related change, outcomes successfully predicted in both literatures pertain to the actors' readiness for such a change in the form of their *employability* and/or *promotability* (e.g., de Pater et al., 2009; Jacobs et al., 2019; Rudolph, Lavigne, & Zacher, 2017).

3.1.2. *Work-related outcomes*

Additionally, given the origin of proactivity models in the wider industrial- and organizational psychology literature and the increasing acknowledgement also in this literature that career adaptation may matter not only for individuals' careers, research has also started to address the link between these concepts and more work-related outcomes. This largely shows in the study of attitudinal outcomes that are usually closely related to subjective career success such as *job satisfaction*, *engagement*, affective *commitment*, and *desire to stay*, yet they also extend to the domain of employees' *performance* on the job. All of these have been successfully linked to adaptability (Rudolph, Lavigne, & Zacher, 2017) and to specific career behaviors such as planning (Ng et al., 2005), job crafting (Rudolph, Katz, et al., 2017), career crafting (Tims & Akkermans, 2020), or career engagement overall (Hirschi et al., 2014).

3.1.3. *Enhanced wellbeing*

Finally, our careers are just a fraction of our lives, and for benefits to be sustainable (e.g., in balancing work with private life), an even wider focus is needed, addressing one's life overall in rather broad outcomes such as our overall *wellbeing*, high positive and low negative general *affect*, low *job stress*, and overall *life satisfaction*. While proactive behavior can also be exhausting (Zacher et al., 2019), the overall effect of the behaviors discussed next appears to be rather positive also in regard to wellbeing (e.g., Rudolph, Lavigne, & Zacher, 2017).

3.2. A circle of action phases

The above outcomes are fostered by behaviors known from research on career adaptation and proactivity. The concrete behaviors studied in both these literatures are rather diverse, combined only by their future and change oriented and – ideally – self-initiated nature. Yet, at the foundation of both literatures lie rather similar models relating to different action phases (Bindl et al., 2012; Super, 1980), and thus, we will integrate the behaviors from both literatures into a common framework of self-regulation. For this purpose, we apply the Rubicon model of action phases (Heckhausen & Gollwitzer, 1987). The Rubicon model dissects goal directed behavior into phases. Each phase implies distinct tasks related to either goal deliberation (motivational mindset) or goal achievement (volitional mindset) that are to be addressed before moving on to the next phase: 1) a pre-decisional phase for orientation and deliberation of one's options, 2) the decision itself (often seen as a point in time rather than a phase, but we will treat it separately for its prime role in career guidance), 3) a post-decisional phase for planning how to implement one's decision, 4) an action phase concerned with striving toward the desired end-state, and finally 5) a phase of reflection (see Fig. 1). In the following, we will always outline the respective Rubicon phase first before highlighting how this phase links to the career behaviors discussed in career adaptation and proactivity.

3.2.1. Pre-decisional phase

The pre-decisional – or exploration (Super, 1980) – phase helps to turn general wishes into binding goals or decisions. People usually have more wishes than they can pursue and thus need to explore and weigh their wishes' desirability and feasibility. Weighing a wish's desirability implies clarifying the expected positive and negative, short- and long-term consequences, and estimating the likelihood that succeeding in a certain action will lead to the desired outcomes. Weighing a wish's feasibility implies clarifying one's ability to succeed in the necessary actions given relevant facilitators and barriers (Achtziger & Gollwitzer, 2018).

In the careers' context, the most relevant behavior in this phase is career exploration, the collection of information relevant to the progress of one's career (Blustein, 1997; Jiang et al., 2019; Jordaan, 1963; Stumpf et al., 1983). This happens via self-exploration, clarifying one's own career-related interests, strengths and weaknesses, and via environmental exploration, seeking to learn about different options in the labor market and their respective requirements, advantages and disadvantages (Stumpf et al., 1983). Together, they help to identify one's own desires as well as a decision's suitability for satisfying these desires – in short the wish's desirability – and help to ensure a sufficiently good match between the demands implied in such a decision and one's own abilities – in short the wish's feasibility. Thoughts on career exploration essentially reach back to the foundations of vocational psychology (Parsons, 1909) and the concept has become omnipresent since the advent of suitable scales (Stumpf et al., 1983). Often presented as the behavioral result of career curiosity (Savickas, 2013), exploration is still advocated as a prime adapting behavior not only at the onset but also throughout one's working life and career (Jiang et al., 2019).

3.2.2. Decision

The end of the pre-decisional phase is a decision, a commitment to a goal with a feeling of determination and certainty of taking the necessary action (Achtziger & Gollwitzer, 2018). Models on self-regulation usually present this decision as a distinct point in time, or even a "Rubicon" (Heckhausen & Gollwitzer, 1987). Making a decision implies that back and forth deliberation about one's general direction stops as one has reached a point of no return – or at least of no expectation to return unless forced. At this moment, people's general motivation turns into concrete volition to move toward the decision chosen.

Given the centrality of career decision making for career counseling in general and career adaptation in specific, career deciding and decidedness are just about the most studied outcome variables of career exploration to date (Jiang et al., 2019) and explicit components of theorizing and research on career adaptation (Savickas, 2005, 2013). In line with models on action phases, having come to a decision as to what type of career goal to pursue (or pursue for now) is actually a precondition for the next task ahead, namely, plan on how then to make this goal actually come about.

3.2.3. Post-decisional/pre-action phase

Making a decision does not inevitably bring the desired outcome about. There is often a time-lag between a decision and the opportunity to implement it (Achtziger & Gollwitzer, 2018). During this time, people benefit from the development of plans specifying when, where, and how to proceed in order to realize their anticipated goals.

This is now the phase where literatures on career adaptation and career proactivity converge in discussing people's career planning (e.g., Fasbender, Wöhrmann, et al., 2019; Hirschi et al., 2015; Spurk, Volmer, et al., 2019), "behavioral scripts or action sequences… [that] individuals believe will help them achieve their career goals" (Seibert et al., 2013, p. 171). Indeed, career planning is a prime predictor of career success (Ng et al., 2005). At the same time, both research streams approach planning generally, focusing on people thinking about (de Vos et al., 2009) and devising strategies to reach their goals (Gould, 1979). That said, the literature on self-regulation has far more to offer for this phase that may be helpful, proposing specific strategies that help people to maintain and shield their goals from distractions in the coming action phase (Gollwitzer, 1999) – but since neither of the literatures on career adaptation and proactivity have picked up on such strategies up to now, we will discuss them in more detail in the recommendations for future research.

3.2.4. Action phase

The action phase focusses on furthering the plans formulated in the pre-action phase, with mental representations of the goal chosen facilitating a steadfast pursuit of these plans, stepping up effort in the face of difficulties and resuming goal-directed actions

after interruptions (Achtziger & Gollwitzer, 2018). The literature on career adaptation – rooted in the practice of career guidance around vocational transitions but not in the practice of continuous coaching in times of relative stability – suggests that people need a strong confidence or self-efficacy (Savickas, 2013), but is otherwise largely silent on putting one's plans into action. Yet, research on career proactivity cover this phase via diverse overt career behaviors, such as announcing and negotiating one's aspirations, pursuing further education or other activities of skill development (e.g., Claes & Ruiz-Quintanilla, 1998; Parker & Collins, 2010; de Vos et al., 2009), proactive job- and career crafting (Tims & Akkermans, 2020), or networking (e.g., Claes & Ruiz-Quintanilla, 1998; Strauss et al., 2012). The latter may actually also be interesting in connecting back to the notion of career cooperation as a potential fifth dimension of the career adaptation framework (Nye et al., 2018) discussed above. That said, the collection of behaviors included does at points appear somewhat eclectic and may need further justification linked to the career decisions and plans previously formulated (e.g., similar to King's, 2004 taxonomy on positioning, influence and boundary management behaviors). At the same time, further research on proactive career activities may also include other types of activities such as proactive job-search (e.g., among employed job seekers, Boswell & Gardner, 2018) or the search of suitable role-models.

3.2.5. Post-action phase

Finally, once an action is done, people reflect on this action, its outcomes and implications for the future. At this point, people often identify possible shortcomings in their earlier pre-decisional deliberations of a path's feasibility and its positive and negative, short- and long-term consequences, and may thus come to consider adjusting or detaching from their goals or adjusting their level of aspiration down- or upward (Achtziger & Gollwitzer, 2018).

The literature on career adaptation has spared this phase rather little attention. While some measures of career exploration also include notions that refer back to the past in order to prepare for the future (e.g., Stumpf et al., 1983 "I have been thinking about how my past integrates with my future"), the notion of post-actional reflection has not truly received much consideration at this level. That said, career construction theory overall does indeed address this phase rather thoroughly, namely when people leave the agent level of career construction and start reflecting about their career from the author perspective (Savickas, 2013). Also some studies on career proactivity address this phase conceptually, arguing that reflection implies the efforts to understand the success, failure, or consequences of past behaviors (Bindl et al., 2012; Frese & Fay, 2001). Career behaviors (in the action phase) that likely facilitate reflection include seeking feedback or mentors or, actually, career counseling – which in turn lies at the practical source of the whole literature on career adaptation. Thus closes the self-regulatory cycle from reflection to pre-decision.

3.2.6. Final note on the phases

Classic action theory assumes a clear consecutive arrangement of phases and respective behaviors (Gollwitzer, 1990). This may not always hold true in the complex careers context. Striving toward a certain goal (action phase), for example, is certainly facilitated by good planning (Locke & Latham, 1990), yet plans change (i.e., moving back toward the post-decision/pre-action phase), depending both on one's progress toward the goal and on further information encountered, possibly by chance, along the way. Similarly, people may change their career plans (post-decision phases) to explore alternative options (pre-decision phase). Whether this happens in parallel, as implied in much of the current careers literature which is often treating career exploration and planning as two parallel processes, or whether true exploration actually only comes about once individuals have tried to implement (action phase) and reflected upon their plans (reflection) remains to be seen. Given that detaching from career paths seriously pursued is costly (Carson et al., 1995) and more difficult to conceive, given the differing motivational states in the post-decisional planning and pre-decisional exploration phases (Heckhausen & Gollwitzer, 1987), processes happening in parallel may possibly happen more likely among people whose previous career paths have been disrupted by serious trauma (van Vianen & Klehe, 2018; Wehrle et al., 2019; Zikic & Klehe, 2006).

3.3. Proximal antecedents

The career behaviors outlined above require effort, and thus a priori motivation. Parker et al. (2010; Parker & Bindl, 2017) proposed the three motivational states of *reason to*, *can do*, and *energized to* as proximal antecedents of proactive actions. As we will discuss below, these three components should also apply for the initiation of adaptation behaviors.

3.3.1. Reason to motivation

Reason to motivation describes people's underlying reasons to engage in career-related actions (cf. Parker et al., 2010). Contemplating, initiating, preparing for and carrying through any type of change – particularly one related to one's career – requires effort, and people would likely not do this without a reason (Savickas, 2013). Regarding the possible reasons, though, the two research streams have focused either on more extrinsic and controlled (career adaptation) or more intrinsic and autonomous (proactivity) reasons. Yet, as findings from both the careers' domain and self-determination show, these two need not necessarily exclude one another (Deci et al., 2017; van den Broeck et al., 2016). Rather, self-determination theory presents a continuum from strong situations demanding certain forms of actions (Mischel & Shoda, 1995), thus causing an external regulation of behavior, via more internalized forms of regulation to intrinsic motivation, with the possibility of any such situation turning more or less self-directed during the process of addressing it.

People may engage in career actions for very *extrinsic* reasons, such as to overcome a career related trauma. Or their motivation may be *introjected*, as when following societal norms to engage in these behaviors, as is the case during developmental career tasks and transitions (e.g., the school to work transition, Savickas, 2005, 2013), when people face social expectations about undertaking certain career related behaviors and decisions. Relatedly, research on proactive behavior pays credit to the possibility of *identified regulation*.

Here, the person accepts the respective actions needed to reach a valued goal, but the action is rather utilitarian without involving the person on a deep emotional level, for example when a career move is undertaken for better career and income prospects. This changes on the level of *integrated regulation*. Here people "have a full sense that the behavior is an integral part of who they are, that it emanates from their sense of self and is thus self-determined" (Gagné & Deci, 2005, p. 335). An example is people engaging in career behaviors to follow a sense of *calling* (Hirschi, 2011; Wrzesniewski et al., 1997) or a "*future work self*", that is, a possible future identity that captures their hopes and aspirations in relation to their career (Strauss et al., 2012). Finally, *intrinsic motivation* comes about when people find a task enjoyable, interesting, or a source of flow. Following one's vocational interests is in itself satisfying and feeds into one's need for self-directedness or autonomy, and people craft their jobs to seek out challenge just because the experience of challenge satisfies their need for competence.

That said, while a more autonomous motivation is preferable to a controlled one for the persistence and depth of processing that it will foster, one's position on the continuum may change. Some people discover new and unexpected opportunities for themselves in the face of career related trauma (Wehrle et al., 2019; Zikic & Richardson, 2007), enhancing their level of autonomous motivation in an otherwise averse situation. Other active and fully engaged career actors grow discouraged from the lack of positive (or even of any) response to their efforts (e.g., Heslin et al., 2012; Maestas & Li, 2006), losing their autonomous motivation until they have become amotivated to invest further into their careers.

3.3.2. Can do motivation

The last example may also highlight that even the best reason may fail to motivate people if they doubt their ability to succeed. "Can do" motivation implies one's beliefs that one can succeed in the endeavor if one sets one's mind to it, that one has enough control over the situation, and finally, that the risks involved are manageable (Parker et al., 2010).

Particularly the first two components, self-efficacy and control, have gained much attention in research on career adaptation. Career-related self-efficacy is often studied in the form of career decision self-efficacy or occupational self-efficacy, even though often as part of the adapting response process (Rudolph, Lavigne, & Zacher, 2017), rather than its antecedent.[1]

The most prominent can do antecedent discussed in research on career adaptation is career adaptability (in the narrow sense), the psychosocial resources that condition adapting behaviors (Hirschi et al., 2015). As these resources usually reflect subjective self-assessments of one's abilities (e.g., "how strongly you have developed each of the following abilities" in the CAAS, Savickas & Porfeli, 2012; short form: Maggiori et al., 2017), they, too, essentially represent context specific self-efficacy. This self-efficacy pertains to the ability to adapt in general (Rottinghaus et al., 2005; short form: McIlveen et al., 2013) or to complete the actions outlined in career construction theory (Savickas & Porfeli, 2012), namely becoming curious about new opportunities and exploring one's surrounding (career curiosity) as a resource for exploration (pre-decisional), making decisions by oneself (career control) as a resource for the act of deciding, preparing for the future (career concern) as a resource for career planning (post decisional), and overcoming obstacles and solving problems (career confidence) as a resource for persisting in the enactment of their plans (action; though please see Hirschi et al., 2015 for a critical empirical examination of these dimension-specific links).

In this sense, also the notion of control outlined to foster proactive behavior (Parker et al., 2010) is usually included in measures of career adaptability (e.g., "My career success will be determined by my efforts", Rottinghaus et al., 2005, or items reflecting the notion of career control in the CAAS, such as "making decisions by myself", Savickas & Porfeli, 2012).

Finally, the literature on proactivity does pay credit to the notion of *risks*, given that proactive behavior by default challenges the status-quo and is thus risky (Parker et al., 2010). Research on career adaptation conceptually pays some credit to this notion, arguing that career curiosity motivates people to also take risks (Savickas, 2013). We are aware of only one career adaptation study, however, that actually touched upon this notion empirically (Koen et al., 2010), and as a post-hoc observation rather than an expectation.

3.3.3. Energized to motivation

Self-regulation is easier when in a good mood. Energized to motivation refers to activated positive affect that sparks career actions (cf. Parker et al., 2010). In theorizing on career adaptation, this notion is implied rather than spelled out explicitly, for example by a notion of optimism regarding one's future career and by career curiosity implying a sense of opportunities worth approaching (Savickas, 2005, 2013). The proactivity literature, in turn, credits the power of passion or "'hot' affect-related motivational states" (Parker et al., 2010; p. 838), particularly of a positive valence and high arousal, to foster initiative. Such energized positive affect can greatly help people envision alternatives, set proactive and approach-oriented goals, persist and devise more creative solutions to problems along the way, and increase their openness to feedback. In this line, Ashforth et al. (2007) found positive affectivity to relate positively to activities such as information and feedback seeking during the socialization into a new job, job-change negotiation, and networking.

[1] The reason for this may be more historic than conceptual: Career adaptation stems from career guidance, where building clients' self-efficacy is pivotal. Yet, self-efficacy is clearly not self-regulatory behavior but a resource facilitating self-regulation (Bandura 1986, 1997). Also, high correlations between career adaptability and self-efficacy (Rudolph, Katz, et al., 2017) and the lack of longitudinal designs to show that a change in the one influences a change in the other and not vice versa do not truly allow causal conclusions on their relative position. Striking in this regard is the finding that interventions aimed – and succeeding – at enhancing career adaptability repeatedly failed to bring about changes in career confidence or self-efficacy (Koen et al., 2012; van der Horst & Klehe, 2019).

3.3.4. Final remark on "proximal antecedents"

Besides being proximal antecedents of career-related actions, it is well conceivable that reason to, can do, and energized to motivation also turn into consequences – for example when exploration enables people to find their calling or to envision a future self that is worth aspiring for, or when detailed plans increase people's sense of control and their self-efficacy to undertake the steps needed along the way to reach their career-related aspirations.

3.4. Distal antecedents

Reason to, can do, and energized to likely result from more distal antecedents that reside in the person, the context, and the interaction between these two (Parker et al., 2010).

3.4.1. Person factors

Person factors have been discussed in research on both career adaptation and proactivity – the first usually labeling them "adaptivity" or "adaptive readiness", the latter more generally "individual differences". Most prominent is people's *proactive personality*, a person's tendency to be unconstrained by situational forces in effecting environmental change (Batemann & Crant, 1993), which brings about proactive behavior in numerous domains (Fuller & Marler, 2009), apparently because it enhances both can do states (such as job-search self-efficacy, Brown et al., 2006, or role-breadth self-efficacy, Parker et al., 2006) and reason to states (such as flexible role orientation, Parker et al., 2006). *Future orientation* (Hoyle & Sherrill, 2006) already implies a tendency to look into and prepare for the future. Trait levels of *positive affect*, *hope* and *optimism* imply that people likely do so with a positive perspective, enhancing both their perceptions of can do (Rudolph, Lavigne, & Zacher, 2017) and energized to. In a similar line, people scoring high on *core-self evaluations*, that is, generalized self-efficacy, self-esteem, internal locus of control, and emotional stability will likely perceive more can do (Rudolph, Lavigne, & Zacher, 2017) and possibly also reason to, thus fostering the respective career behaviors (Ashford & Black, 1996; Parker et al., 2010).

Past research has shown the relevance of all other big five personality dimensions, too. Most prominent is the role of *conscientiousness*, which correlates positively with both career adaptability (Rudolph, Lavigne, & Zacher, 2017) and different career behaviors, such as career planning (Carless & Bernath, 2007), information (Tidwell, 2005) and feedback seeking, career initiative, and job-change negotiation (Parker & Collins, 2010).

Furtherer relevant personality dimensions are one's *openness* and related constructs such as one's *trait curiosity* and *learning orientation*, given that any of the career behaviors discussed, most prominently career exploration, essentially serve to bring about some degree of change (Parker & Collins, 2010; Rudolph, Lavigne, & Zacher, 2017; van der Horst et al., 2017).

Finally, not only personality will influence career behavior, but also one's cognitive abilities and previous qualifications and experience, given that these should influence one's can do evaluations (Parker et al., 2010; Rudolph, Lavigne, & Zacher, 2017).

3.4.2. Situation and context factors

Contextual factors likely to stimulate the career activities outlined above are plenty – and the list below is likely far from exhaustive. Extreme stimulants mentioned in career construction theory are work *traumas*, painful and often non-anticipated events such as plant closings, industrial accidents, occupational injuries, and contract violations that are strong extrinsic motivators for change (Savickas, 2013). Less dramatic (and by default related to rather introjected "reasons to") are vocational development *tasks*, age-graded normative transitions with clear social expectations (cf. Lawrence, 1988), such as when young people need to prepare for their entry into the work-force, with social norms priming them to view work as important, to crystallize preferences for vocational fields and levels, and prepare for their entry into a respective job. Lastly discussed in career construction theory, *transitions* describe the move from one job to the next, whether in the form of promotions, demotions, lateral moves, whether wanted or unwanted, planned or unexpected. With this, transitions may be caused externally or self-initiated.

In this sense, people may also react to emerging *opportunities* – such as new market developments in general or on the job market in particular. With this, they may also pursue activities such as proactive job search for completely different reasons than to change jobs, such as to network, stay aware of their alternatives, or to have leverage in negotiations with their employer (Boswell & Gardner, 2018). Or, they may engage in such behavior because of *constraints* in their current situation they want to evade. Examples are when the current job does not provide the autonomy, opportunities for skill development, or connectedness to others that people feel needed for prospering at work (Deci et al., 2017), or when it constrains one's ability to balance work with private life, for example by not being able to work the hours that one would like to work, by requiring a long commute, or making ends meet.

Similarly, people may face certain *stressors* (such as chronic working conditions like work over-load or daily hassles like poor relations with their supervisor; Israel et al., 1996) that may motivate them to change their career situation. And they may depend on certain *resources*. These include their own opportunities to influence decision making, e.g., when crafting their jobs and careers or seeking challenging experiences, or the social support that they receive from supervisors, colleagues, and family, e.g., when pursuing further education besides one's work, quite likely cutting into one's number and flexibility of working hours, one's paycheck, and family-time. Related to this is the notion of psychological safety, the ability to show and employ one's self without fear of negative consequences of self-image, status or career (Kahn, 1990, p. 708). Feeling safe will make it easier to aspire to and try new roles without fear of repercussions.

3.4.3. Interaction between the person and the context

Finally, person and situation factors are likely to interact. In the sense of striving for a good person-environment fit, external

opportunities may differ in their appeal and constraints may differ in the level of annoyance that they cause, depending on the person's own needs, aspirations, and personality. A person high on openness or learning orientation may more likely jump at an opportunity to broaden their knowledge, and a person with a strong internal locus of control may be less patient to job conditions that restrain their sense of autonomy.

Also, situational triggers such as traumas, tasks, and transitions may certainly give people convincing external 'reason to' engage in career activities, yet the whole tenet of proactivity is that some people may instigate these behaviors also without such triggers. In this sense, weaker situations, i.e., those that do not innately call for career-related actions, will offer more room for individual differences to play a role (Mischel & Shoda, 1998).

That said, even traumas such as job loss give room for personal interpretation. Some lay-off victims even describe it as a "blessing in disguise" (Zikic & Richardson, 2007), putting a positive spin on a dire situation. While not addressed in that (usually qualitative) research, it is quite likely that individual differences such as trait levels hope or optimism do play a role in how people interpret a given situation.

4. "The activity of making them changes both the maker and the destination": directions for future research

Overall, research on career adaptation and proactive career thus integrates rather well into a common framework. Yet, this integration also suggests some research questions to be tackled in the future, namely (1) capturing career-related actions more broadly, (2) testing the full cycle of career-related actions, (3) extending proximal and distal antecedents, (4), using person-centered approaches to link proximal and distal antecedents to career-related actions and subsequent outcomes, and (5) considering the potential downsides of these actions.

4.1. Capturing career-related actions more broadly

While much research addresses the pre-decision (career exploration; Jiang et al., 2019) and post-decision/pre-action phases (career planning; Bindl et al., 2012; Fasbender, Wöhrmann, et al., 2019), research is more silent and/or disjoint about career decision (deciding), action (striving), and post-action (reflection). Following self-regulation research (Achtziger & Gollwitzer, 2018), future research may capture these career-related actions more broadly.

Because scholars often see decision-making as a one-off event (cf. Achtziger & Gollwitzer, 2018), little is known on how people actually make career related decisions. For example, the timing or temporal proximity of career decisions likely matters. Already Lewin (1935) argued that the further away an event is temporally, the less impact it has on people making a decision (Steel, 2007). Trope and Liberman (2003) introduced the role of temporal construal in decision-making. They argue that the higher the temporal distance, the more events are represented in terms of a few abstract features that convey the perceived essence rather than in concrete and incidental details of the events. This in turn can bias our decision making. For example, a career decision about changing a job in the near future (e.g., a few weeks) entails concrete details (e.g., moving into another city for the job, getting to know new colleagues, while leaving old ones behind), whereas changing the job in the more distant future (e.g., six months or one year) appears rather abstract (e.g., becoming a supervisor, moving up the career ladder). Therefore, temporal construal may be relevant for understanding people's career decisions and their consequences because distant events are typically seen more favorably than near events due to the absence of concrete, contextual, and incidental details.

In conducting longitudinal research, scholars may therefore pay attention to the time lags to be implemented. On the one side, larger time lags, such as one year, likely lead people to envision their career trajectory more abstract and positive (cf. Förster et al., 2004), which in turn motives them to engage in promotion-focused behaviors that tend to benefit career- and work-related outcomes (Lanaj et al., 2012). On the other side, shorter time lags, such as a few weeks, lead people to interpret their career trajectory more concrete and critical (cf. Förster et al., 2004), which in turn may motivate more prevention-focused behaviors. These may help career-related "damage control", such as reduced stress symptoms in times of job insecurity (Tu et al., 2020), but may elsewise lower career and job attitudes (e.g., job satisfaction, Lanaj et al., 2012; protean and boundaryless career attitudes, Hofstetter & Rosenblatt, 2017). Taking motivational states related to short vs. long time lags into account thus highlights that how people put career decisions into action (via planning) may depend on the outcome's temporal proximity. Further, it would be intriguing to study the consequences of people's decision making based on different time lags, to see how the response is changing as time passes.

The self-regulation literature further offers insights on goal shielding and maintenance strategies prepared in the post-decision/pre-action phase that allow metacognitive persistence and continued effort in planned career-related actions during the action phase. Goal maintenance refers to reminding oneself about the importance of the goal and gratification linked to its achievement; whereas goal shielding refers to implementation intentions, automatic if-then statements where goal-directed responses are linked to specified situations (Gollwitzer & Schaal, 1998; Koestner et al., 2002). Research on self-regulation attests to the importance of these implementation intentions and yet, except for the job search domain (see e.g., Fasbender & Klehe, 2019; van Hooft et al., 2005; van Hooft et al., 2013), career research has largely ignored their utility. We thus recommend future research to study the utility of implementation intentions for individuals' career development not only during job search but also in other forms of transitions (e.g., school-to-work, work-to-retirement transitions).

Research may also study the post-action phase in more detail. As central to the post-action phase, reflection helps to gain self-knowledge, which is relevant for personal growth and development (Parker & Bindl, 2017; Savickas, 2013). Reflection is linked to the search of meaning in daily life (Newman & Nezlek, 2019) and understanding what is meaningful in life can help people construct satisfying careers (Savickas, 2013). Yet, reflection on negative experiences can also intensify negative emotions (Cova et al., 2019),

thus possibly draining the 'energized to' resource needed for engaging in the career actions outlined above. It is therefore important to understand when reflection will support forward-looking career actions and when it may be harmful. For example, seeking feedback from others may help to identify blind spots on one's behavior that encourages personal development. Yet, this reflection process may also turn one's attention toward unhelpful trait-level self-ascriptions (Kluger & DeNisi, 1996) or bring back memories of negative experiences and traumas that are difficult to overcome. Hence, the benefits of reflection may actually depend on factors such the success and failures to be reflected, the person's own resiliency, or the social support that they receive (cf. Brammar & Lezova, 2018) in order to uphold their 'can do' and 'energized to' motivational states when digesting the information received.

4.2. Testing the full circle of career-related actions

Furthermore, while contemplating about the individual phases of career-related actions is certainly useful, it is even more important to understand their interconnectedness. In this paper, we integrated career-related actions in a self-regulatory cycle of exploration, deciding, planning, striving, and reflection based on previous research on these individual phases and yet, we currently lack comprehensive and integrative tests of these career-related actions. Empirical evidence is necessary to understand how the quality and engagement in one phase shapes the subsequent phases. In this regard, we urge scholars to test the entire cycle of career-related actions over time. For example, scholars may study how exploration can benefit deciding or also enhance the benefits associated with career planning, but also consider when exploration can lead to decision-making difficulties because under extensive exploration too many options are in consideration that potentially exceed people's decision-making capacities and therewith may hinder subsequent phases, such as planning and striving. Here, scholars may also test the utility of in-breadth vs. in-depth exploration and consider that both strategies have their reason at different points in peoples' career development (Porfeli et al., 2011). For instance, in-breadth exploration (diversive) may be useful for newcomers and school-to-work transitions, whereas in-depth exploration (specific) may be useful to more advanced and mature workers' career decisions (Porfeli & Skorikov, 2010). In this regard, we also point to the importance of researching people's career development over the lifespan, ranging from school-to-work transitions to work-to-retirement transitions (Fasbender & Deller, 2017).

4.3. Extending proximal and distal antecedents

Researchers may extend the search for proximal and distal antecedents of career-related actions. With regard to proximal antecedents, we need more research on both reasons and 'energized to' motivators of career-related actions. Regarding 'reason to', the link of adaptation to extrinsic and proactive career behaviors to more autonomous (intrinsic, integrated, identified regulation) forms of motivation appears simplistic at best and pays too little credit to the dimensions and dynamics of motivation across time. Quality of motivation may matter, yet it is also fluid and possibly multifaceted. For example, when layoff victims come to see benefits in a trauma-induced need to re-plan their careers (Zikic & Richardson, 2007), the instigator is an extrinsic trauma, yet the quality of motivation experienced may still be highly autonomous. In this regard, future research may track the development of motivational quality prior to and during a transitional period across time to address both its development and its consequences for people's engagement in the relevant career activities.

Regarding 'energized to', research has mainly focused on activated positive affect (e.g., Ashforth et al., 2007), as this supposedly encourages career-related action (cf. Parker et al., 2010). Yet, it may help to dive deeper into the role of discrete emotions (e.g., Lazarus & Cohen-Charash, 2001; Lindebaum & Jordan, 2012) such as joy, pride, relief, hope, love, gratitude, or compassion to deepen our understanding of individuals' career development. Discrete emotions can help to link situational experiences to action tendencies. For example, Kreemers et al. (2018) found that compassion (i.e., low activation positive) can help job seekers deal with difficulties and setbacks during their job search. Further, positive emotions may also have negative effects, while negative emotions may have positive effects. For example, Burmeister et al. (2019) found differential effects for the two negative emotions guilt and shame on employees' behavior; shame reduced and guilt enhanced prosocial behavior at work. It is not implausible to assume that some negative discrete emotions (e.g., anger about organizational barriers, but also instances of anxiety, fright, envy; Lazarus & Cohen-Charash, 2001) can also foster career-related actions.

Scholars may also focus on environmental factors that facilitate reason to, can do and energized to motivators for career-related actions. While the wider proactivity literature emphasizes the role of context (Frese & Fay, 2001; Parker et al., 2010), as do qualitative studies on career decision making, much of the quantitative career adaptation and proactivity literatures pays rather little credit to the role of social context in career decision making. Yet, different stakeholders in- and outside the organization influence career decisions.

Inside an organization, supervisors can recommend a person to make a career move, but also supervisors among themselves may decide for the individual, leaving the person with little choice but to move to the next level or to quit. Also, qualitative connections and cooperation play a vital role in when and how people do actually adjust to career-related traumas and transitions (e.g., Wehrle et al., 2019). For example, being socially embedded in a job and having friends at work can reduce turnover intentions (Fasbender, van der Heijden, & Grimshaw, 2019; Nielsen et al., 2000). Outside the organization, family and friends matter. As such, the career development of one's partner may influence the own career decision (e.g., Denaeghel et al., 2011). We thus recommend scholars to explicitly take the context inside and outside the organization into account when researching career-related actions. In addition, in line with trait activation theory (Tett & Burnett, 2003; see also Parker et al., 2010), scholars should pay attention to the interaction between person and context factors.

4.4. Using person-centered approaches

With regard to both, proximal and distal antecedents, we need more research regarding the strength and weakness profiles and their impact on career-related actions and outcomes. The majority of research in careers is based on variable-centered approaches assuming that people's career-related actions can be best understood by a single set of averaged variables. This dramatically simplifies reality (Hofmans et al., 2020; Sonnentag, 2017). Typical variable-centered approaches assume homogeneity among the population (Laursen & Hoff, 2006), and thus focus on the (common) relations between variables in all members of the investigated population (Nagy et al., 2019). Although interactions between variables can be assessed in variable-centered approaches, this becomes difficult and impractical with an increasing number of interacting variables considered (Hofmans et al., 2020). In contrast, person-centered techniques (e.g., latent profile analysis) acknowledge interindividual differences (based on heterogeneity in the population) and intraindividual variation between different underlying variables (Nagy et al., 2019), therewith "shifting the attention away from a focus on variables to a focus on individuals" (Hofmans et al., 2020, p. 2).

The use of profiles is common in determining vocational interests (e.g., Ferguson & Hull, 2019; Perera & McIlveen, 2018; Sung et al., 2017), yet is scarce in linking proximal and distal antecedents to career-related actions and subsequent outcomes. As an exception, Hirschi and Valero (2015) tested career adaptability profiles (concern, control, curiosity, and confidence) as predictors of career-related actions (exploration, deciding, and planning), and Semeijn et al. (2020) found that a person-centered "profile" approach based on the big five personality traits had exploratory value in predicting career success beyond a variable-centered "trait" approach. Following this line of research, we echo Savickas' (2013; see also Sonnentag, 2017) call for more person-centered research. Future research may widen the methodological repertoire (e.g., using latent profile analysis, for a review of different person-centered techniques see Hofmans et al., 2020) to investigate how profiles of proximal and distal antecedents are linked to profiles of career-related actions and subsequent outcomes.

4.5. Considering potential downsides of career-related actions

Previous research has well documented the positive consequences of adapting and proactive career behaviors (e.g., Jiang et al., 2019; Rudolph, Lavigne, & Zacher, 2017; Wiernik & Kostal, 2019). Yet, it has been less eager to test these behaviors' costs and risks, such as when exploration enhances the risk of people considering and ending up in jobs that do not match their abilities and needs (Koen et al., 2010). Is such finding, for example, a direct consequence of exploration or possibly only of exploration under the given difficult context?

Also, these behaviors require and deplete effort and cognitive and emotional resources (Bolino et al., 2010; Grant et al., 2011; Strauss et al., 2017). For example, Fay and Hüttges (2017) found that daily proactivity at work lead to higher levels of cortisol as an indicator for strain and reduced daily well-being and Zacher et al. (2019) found that change in personal initiative lead to changes in emotional engagement and exhaustion. Although these studies were conducted in the work context in general, they are indicative for potential risks of career-related actions. Considering the fact that resources are limited, it seems plausible that career-related actions can hamper well-being as they are effortful. This in turn may also has detrimental consequences for others, such as colleagues, because other-oriented behavior (e.g., providing instrumental and emotional support) may suffer when resources are depleted.

Furthermore, career-related actions may sometimes also harm organizations. Klehe et al. (2011) found employees' self and environmental exploration to link negatively to their organizational identification, yet positively to their turnover intentions, job search, and actual turnover. Relatedly, Nielsen and Firth (2018) found that proactive people tend to react more strongly on organizational barriers that prevent personal growth and achievement (i.e., hindrance-stressors) with intentions to leave the organization. These initial findings suggest some risks of career adapting and proactive behaviors for organizations, at least under some circumstances. In the human resource management literature, de Cuyper and de Witte (2011) raised a similar discussion about the "employability paradox", namely whether organizations' investment in employees' employability (i.e., their perceived internal or external career opportunities) may benefit and harm organizations at the same time. Apparently, internal employability is linked to higher affective commitment and task performance (de Cuyper & de Witte, 2011), while external employability can foster employee turnover (Nelissen et al., 2017) – at least under some, albeit limited, circumstances (Rodrigues et al., 2020). Overall, these results suggest that the investment in employees' employability may not necessarily cause a dilemma for organizations, yet future research may address the circumstances under which career related actions may also help and circumstances under which they may actually hurt the employing organization. Taken together, we thus encourage scholars to systematically study the potential downsides of career-related actions for individuals, their colleagues, and organizations to receive a more realistic picture.

5. "The paths are not to be found, but made": practical implications

Finally, our model suggests practical ways in which individuals, organizations, and third parties (career counselors, family, friends) can foster career behavior aimed at enhancing people's person-environment fit, whether in response to a trauma or from one's own initiative.

5.1. Individuals

People have several options to engage in career development. One way is to focus on strengthening their individual resources that serve as antecedents of career-related actions. While distal antecedents (such as trait proactivity or trait curiosity) are rather stable and

therefore difficult to change, individuals can invest in strengthening their proactive motivational states: They can adjust their 'reason to' engage by critically reflecting on their underlying motivation for career development and filling it with meaning (Savickas, 2013). The resulting identified motivation (i.e., individuals' experience of importance and meaning) is likely most powerful for career-related actions (Sheldon et al., 2020). Furthermore, people can build their 'can do' motivation (e.g., career adaptability, career self-efficacy) via trainings. Such trainings have shown to be effective for individuals' career adaptability (e.g., Green et al., 2019; Koen et al., 2012; van der Horst & Klehe, 2019) and career self-efficacy (e.g., Falco & Summers, 2019; Glessner et al., 2017). Furthermore, individuals may focus on their 'energized to' motivation (e.g., positive affect, state optimism) by reflecting on their individual strengths (i.e., strength identification, development, and use; see strengths intervention by Meyers & van Woerkom, 2017). Relatedly, individuals can boast their career optimism by taking part in a networking plus career coaching intervention, gaining awareness and learning how to apply personal networks as a career-related resource (Spurk et al., 2015).

Alternatively, and indirectly strengthening states of 'reason to', 'can do', and 'energized to' as well, people may try to adjust their situation in a way that facilitates proactive career behaviors – such as negotiating for more autonomy in terms of the time or assignments worked, crafting their jobs and careers in a way that suits their own career aspirations and enhances their person–job and person-career fit, and/or searching for a new job more suitable for such endeavor. In essence, they thus need to show proactive career behaviors in order to get into a situation conductive of such behaviors. From a cynics' perspective, such call seems tautological, from an optimists, it implies a self-reinforcing circle in which small proactive steps may facilitate a context enabling wider steps.

5.2. *Organizations*

The proposed model is also relevant for organizations. The current Deloitte Human Capital Trends (2019) lists learning, talent mobility (moving and developing workers within the organization), access to talent, and improving employees life at work, as top human capital priorities for organizations worldwide. Many initiatives target these outcomes separately via employability- and talent development programs, workshop on vitality or stress management, etc. What is often missing, however, is an integrated approach that motivates employees to learn, develop, and keep moving within the organization, rather than orient themselves to the outside. Management could focus on enhancing job characteristics such as job control, social support, and challenging job demands, that may activate proactive behaviors (Ohly & Fritz, 2010; Parker et al., 2010; Tornau & Frese, 2013) as well as a climate for initiative (Raub & Liao, 2012). One approach may be to include career management systematically into the annual review process, not for evaluating employees but for using the review as a jour fix to discuss and possibly identify needs and aspirations, options and risks, and goals for further development. The idea would be to enable employees to be self-directed in their work and careers (reason to) – which supervisors can support and coordinate more easily if they know about their employees' aspirations and needs, to help them identify risks but also avenues for growing the competencies needed for meeting their aspirations (can do), and generally to grow one's positive energy around the development projects pursued.

Such individualized approach does need two things, however: First, it needs a supportive culture and adequate social support from management, coaches and/or colleagues that promotes development and growth among employees and psychological safety (Kahn, 1990) to buffer against the risks of exploring, announcing, and pursuing career related goals.

And second, besides truisms from classic job design (Hackman & Oldham, 1980), which also facilitate job crafting, organizations may look for individualized adjustments of employees' job demands and resources. Given peoples' individual differences, individualized interventions such as i-deals (i.e., idiosyncratic employment arrangements; Rousseau et al., 2006) could be an effective way to adjust the work to individual needs and preferences (Guerrero et al., 2016). But for i-deals to be effective, it is important to avoid envy and perceived competition among employees, as these can hurt work-team cohesion and lead to employee turnover (Ng, 2017). This points to the importance of equality and inclusion, meaning that idiosyncratic arrangements are useful as part of inclusive HR-practices open to everyone (Boehm et al., 2014). This requires organizations to invest in their HR department as they need to move away from a one-size-fits-all approach and instead develop an individual needs-based approach available to the entire workforce.

5.3. *Third parties*

Finally, third parties, such as career counselors, family and friends, can support individuals' career engagement in multiple ways. One aspect where career counselors may become even more supportive than they are now is the post-decisional/pre-action phase. Besides fostering the generation of general career plans, career counselors may support individuals by working on their implementation-intentions, concrete if-then statements, which help to link the desired behavior to certain situations and allow for automatized responding (Koestner et al., 2002). They may also, like mentors, help people reflect upon and monitor their career behaviors by remaining in contact also throughout the complete action phase.

Last but not least, family and friends can support career development. For example, praising and reminding people in transition of their strengths, skills, and abilities can help them build their career self-efficacy (Del Corso & Rehfuss, 2011). Social support facilitates school-to-work transitions (e.g., Hlad'o et al., 2019; Hui et al., 2018), job search (e.g., Fasbender & Klehe, 2019; Kanfer et al., 2001), work-to-retirement transitions (e.g., Wöhrmann et al., 2013), and career development overall (e.g., Chope, 2006; Del Corso & Rehfuss, 2011), making family and friends an important resource to support individuals in building their careers in a way that allows them to strive for their own personal definition of fit and success.

CRediT authorship contribution statement

Ute-Christine Klehe: Conceptualization, Methodology, Writing – original draft, Writing – review & editing, Project administration, Visualization. **Ulrike Fasbender:** Investigation, Data curation, Writing – original draft, Writing – review & editing. **Anna van der Horst:** Writing – original draft, Writing – review & editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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