Journal of Vocational Behavior 117 (2020) 103196

Contents lists available at ScienceDirect

Journal of Vocational Behavior

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

Sustainable careers: Towards a conceptual model☆

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ARTICLE INFO

Keywords:
Career development
Sustainable career
Conceptual model
Theoretical framework

ABSTRACT

This paper aims to move the research field on sustainable careers forward by building conceptual clarity about what a sustainable career means and delineating what distinguishes sustainable from non-sustainable careers, thereby providing key indicators of a sustainable career. Moreover, we approach sustainable careers from a systemic and dynamic perspective and address influential factors associated with stakeholders situated in multiple contexts and evolving over time. We elaborate on core theoretical frameworks useful for enhancing our understanding of what makes careers sustainable and present three key dimensions that can help to analyze and study sustainable careers: person, context, and time. Finally, we propose a research agenda that we hope will spur scholars to examine the topic in more detail in future empirical work.

1. Introduction

The rapidly changing and unpredictable global economic environment in which careers unfold has made sustainable careers an increasingly salient concern for individuals, organizations and societies (Lawrence, Hall, & Arthur, 2015). According to Van der Heijden and De Vos (2015), sustainable careers refer to "sequences of career experiences reflected through a variety of patterns of continuity over time, thereby crossing several social spaces, characterized by individual agency, herewith providing meaning to the individual" (p. 7). Although all careers involve a sequence (or sequences) of work experiences over time, not all typologies of sequences might be equally sustainable and many factors might impact career sustainability throughout the course of one's working life. Moreover, careers form a complex mosaic of objective experiences and subjective evaluations, resulting in an enormous diversity in terms of how careers can take shape and a major variety of individual reflections regarding whether one's career is sustainable or not.

The idea of sustainable careers comprises an addition to the prevailing sustainability debate: similar to how physical sustainability considers the consequences of organizational activity for material and physical resources, and to how social sustainability considers how organizational activities affect people's physical and mental health and well-being (Garavan & McGuire, 2010; Pfeffer, 2010), career sustainability can be considered as a particular form of human sustainability, that is, the capacity to create, test and maintain one's adaptive capability (Holling, 2001). Although the notion of a sustainable career has received increasing attention in scientific journals (e.g., Anseel, 2017; Veld, Van der Heijden, & Semeijn, 2016) and also at major academic conferences, it is still in its very early stages of development. We formulate three key starting-points for bringing this literature further. First, the paradigm of the

☆ Funding for writing this paper was obtained from the Flemish Research Fund, as part of the EOS research grant FWO ID G0E8318N EOS ID 30987235.
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https://doi.org/10.1016/j.jvb.2018.06.011
Received 29 March 2018; Received in revised form 21 June 2018; Accepted 22 June 2018
Available online 25 June 2018
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sustainable career is in need of more conceptual clarity and could benefit from a nomological network that describes what comprises a sustainable career, what are the indicators characterizing a sustainable career, and what are the key dimensions that can be used to analyze the sustainability of careers. Second, profound theory building on sustainable careers is lacking until now. It would be an important next step to explore which existing theories or theoretical frameworks might provide further ground for a better understanding of sustainable careers, and to shed more light onto how and why sustainable – and non-sustainable – careers develop. Third, it is necessary to develop appropriate research designs and methodologies. Recent developments in this area – such as the rise of complex longitudinal change models and data mining techniques – could contribute to this research area as well. The scholarly field of sustainable careers is in need of strong empirical studies that advance our understanding of its core dimensions and dynamics, as this will bring the knowledge forward with evidence-based findings that can confirm or disconfirm prior conceptualizing and theorizing.

Based on these three central premises, the objective of this paper is to: (1) build conceptual clarity about what a sustainable career means and delineate what distinguishes sustainable from non-sustainable careers, thereby providing key indicators of a sustainable career; (2) approach sustainable careers from a systemic perspective thereby addressing influential factors associated with stakeholders situated in multiple contexts and evolving over time; (3) elaborate on core theoretical frameworks useful for enhancing our understanding of what makes careers sustainable; (4) present three key dimensions that can help to analyze and study sustainable careers; and, finally; (5) propose a research agenda that we hope will spur scholars to examine the topic in more detail in future empirical work. In doing so, we respond to calls to contextualize careers (e.g., Akkermans & Kubasch, 2017; Clarke, 2013; Inkson, Gunz, Ganesh, & Roper, 2012) and stress that, instead of framing careers using a linear perspective, a cyclical process is more suitable to reflect the infinite variety in which careers can take shape.

2. Conceptualizing sustainable careers

The idea that careers reflect the continued employment of individuals in jobs that facilitate their personal development over time has been the underlying ideology of career research for a long time (Lawrence et al., 2015). However, up until now, this philosophy has largely remained implicit, and, moreover, people differ considerably as regards to how personal development ought to take place according to them, in order to be perceived as being successful and enduring. Recently, the sustainable career paradigm has started to gain momentum, for example being linked to HRM policies (De Vos & Van der Heijden, 2017), aging and motivation (Akkermans et al., 2016), learning agility (Anseel, 2017), and employability (Veld et al., 2016). In addition, the topic of sustainable career development has also been discussed from slightly different perspectives. For example, Herman and Lewis (2012) studied how sustainable careers of mothers could be achieved, Baldridge and Kulkarni (2017) examined how individuals with a disability – in this case: hearing loss – might shape a sustainable career, and Kossek, Valcour, and Lirio (2014) examined sustainable career development in relation to work-life balance. However, despite the rising momentum in studying sustainable careers, there is still a lack of an overarching and clear theoretical framework that allows grounded empirical investigation of this phenomenon. The theoretical framework that we develop in this paper considers the individual as the focal person yet takes a *systemic approach* to understand the multiple factors affecting career sustainability and a *dynamic approach* to capture how changes over time affect career sustainability.

First, we approach sustainable careers from the individual perspective, considering the individual as the central career actor. However, at the same time, each individual's career is inherently interconnected with, is influenced by, and has implications for other stakeholders and contexts. The challenge of sustainability thus encompasses more than individual career management and requires the active involvement of all parties involved, such as the individual's family and peers, supervisor(s), employer, educational system, and society. Therefore, in developing a theoretical framework of sustainable careers, a crucial assumption is that, in order to better understand individual career sustainability, a multiple-stakeholder perspective needs to be taken (cf. Colakoglu, Lepak, & Hong, 2006). Contemporary career theory suffers from a lack of systematic attention to context – that is, the situational constraints and opportunities that affect attitudes and behaviors (Johns, 2006) – and the stakeholders operating within this context, as it tends to put a strong emphasis on the individual as the central career actor (Inkson et al., 2012). Yet, the extent of 'activeness' by the person is likely to depend on and interact with the context, creating more or less space for personal initiative, or (unconsciously) affecting personal initiative, for instance due to family norms, organizational policies, occupational sector, country, and cultural factors. Therefore, in order to reflect an integrative approach, different levels of influential factors have to be taken into account in addition to the individual level. We advocate that it is this systemic perspective that sets the sustainable career concept apart from other contemporary 'types' of careers, such as the protean (Hall, 2002) or boundaryless (DeFillippi & Arthur, 1994) career concept, while recognizing all of their added values (De Vos & Van der Heijden, 2017; Van der Heijden & De Vos, 2015).

Second, we conceive sustainable careers as a dynamic process and shed further light on how both factors within the person and within their context change over time, thereby affecting the sustainability of careers (Nagy, Froidevaux, & Hirschi, 2018). Sustainable careers can hence be understood as a cyclical, self-regulatory process (Lord & Maher, 1990) in which (positive and negative) experiences and events, and how these are perceived and interpreted by the individual and the different parties involved, provide opportunities for 'dynamic learning'. The latter, in turn, enables individuals to adapt to and to influence their environment, as their career evolves, by sharpening their understanding of themselves, their personal and organizational context, and the broader labor market. Ultimately, this allows them to continuously refine perceptions regarding their person-career fit over time (Parasuraman, Greenhaus, & Linnehan, 2000). Fig. 1 presents the theoretical model that will be elaborated systematically throughout this paper. We start with describing what characterizes a sustainable career and we discuss the three categories of indicators of sustainable careers included in our model, thereby departing from three fictive cases.

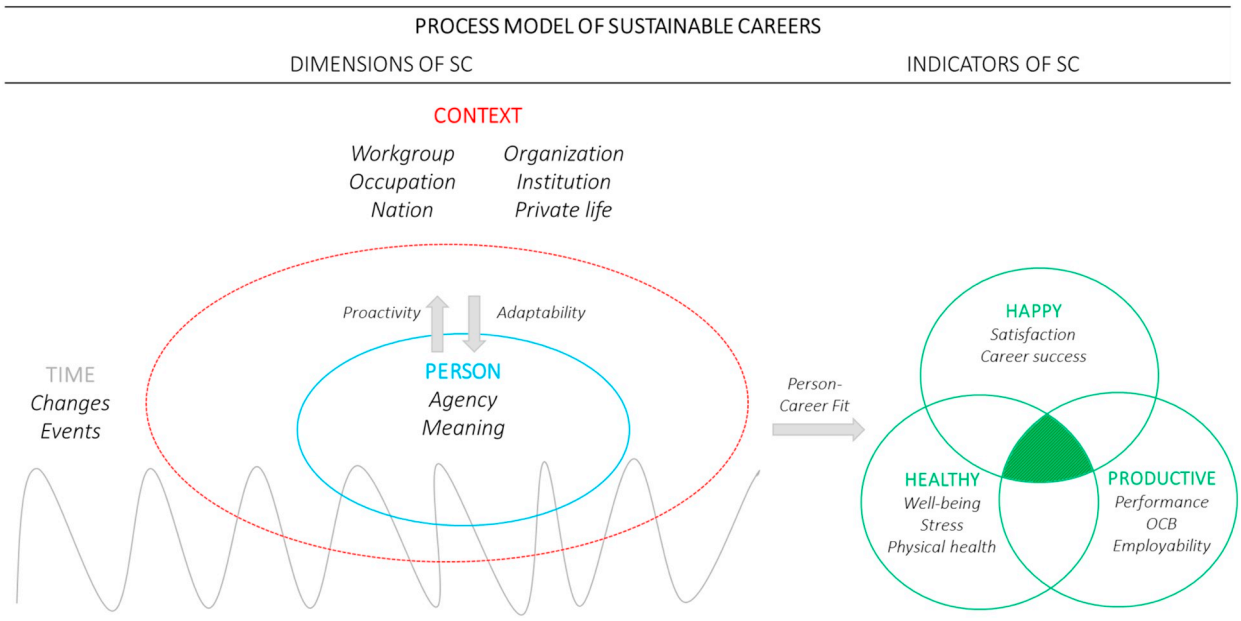

Fig. 1. Conceptual model of sustainable careers.

3. What characterizes sustainable careers?

Barbara (57): Juggling work and family responsibilities

Barbara has been working as a support staff member at a university for over 30 years. She asks her supervisor whether she can take leave to provide care for her father, who is very ill. It is very important for her to spend as much time as possible with him and to emotionally and physically support him. Because she does not have children herself, she has never felt the desire to work part-time in her earlier career stages, and has been 'fully available' for the university over the past 30 years, working long hours at a very high productivity rate. Barbara reports to be very concerned about whether she will be able to successfully juggle all activities, and is afraid that her health and well-being will be in danger when having to combine her job with her caregiving. She believes that she will be able to continue working, and protect her sustainable employability until her retirement age when she can reduce her weekly work hours. Her supervisor understands and grants her this request, and enables her to use her available holidays for this. Due to the illness of her father, Barbara did not take any leave yet over the past year, and would have lost almost all of her holidays following the law. Barbara is very happy with this solution, and can now be one day in the week in the hospital for the coming 45 weeks, and promises to be flexible in which day of the week she will be in the hospital for caregiving. As such, the progress of the teaching and research programs that she manages is not at stake.

Jamal (41): From Rising Start to Fading Star…?

Jamal had a great start of his career: as a highly talented baseball player, he received a special grant to pursue a professional career, so he could combine his education with his passion. He successfully finished school with high grades and also further developed his incredible talent as a pitcher in a major baseball team. When Jamal turned 18, he signed his first contract with one of the biggest baseball teams in his country. Everything was working out well for Jamal: he became the Season's Most Valuable Player when he was just 21 years, he got married and had two children, and continued to have success as an internationally renowned baseball player. Unfortunately, tragedy struck Jamal when he got seriously injured at the age of 26, which caused his early retirement as a professional baseball player. His passion lost to him because of this unfortunate injury, Jamal slipped into a depression, started drinking, and became unemployed for three years. Although he and his wife managed to save their marriage, Jamal hit rock bottom in a major way. When he was 30 years, though, he happened to have a talk with a former teammate from his baseball team, who told him how much he had always respected and looked up to Jamal, and he encouraged Jamal to put his incredible talent to good use by joining him in training young players. Jamal ultimately gave it a try and found out that training young players gave him an incredible satisfaction. Now, more than ten years later, Jamal has set up a special school for young and talented baseball players, which he runs with his former teammate. The school is a great success and has brought forward several rising stars that moved on to play for major national baseball teams.

Emma (32): Kick-starting her career

Emma studied applied economics. She was hired by a management consulting firm directly upon graduation. Her first years in this job were a true roller coaster, with plenty of assignments in a challenging, young, and dynamic work context, which she summarized with the motto "work hard, play hard". Emma's dedication to her job and strong results were noticed by her senior managers, and one of them took up a mentoring role, allowing Emma to quickly develop her consulting skills and grow her personal strengths. It brought her on the fast track for promotion, leading to a role of senior consultant after only two years. Her busy life came at a crossroad when, at the same time of the next promotion opportunity, she got married and became pregnant of twins sooner than she had anticipated. Emma had a difficult pregnancy, forcing her to rest regularly, but she continued working remotely. When her twin-boys were born, she went through a challenging period keeping up with all her tasks as a mother, yet not willing to give in on her professional responsibilities. With her husband having an equally challenging job, this was not an easy task. At the age of 32, Emma felt herself not being capable anymore of feeling successful in any life domain and that it was time to reconsider what was needed for her in order to have a satisfactory professional and private life. Her mentor at work proved to be very valuable at this point. He advised her to follow some career coaching, and this helped her to get grip on her life again. She realized that she still felt a very strong person-career fit, despite the high work demands, but she also knew that the company culture would not allow for a reduced workload. Yet, she still felt she didn't want to leave her job. The solution came after many talks with her husband, who decided to quit his job and start working closer to home, allowing him to take on more family responsibilities. They agreed that it was equally important for both of them to have a successful career and happy family life, and that they would reconsider priorities in both life domains every few years.

The three cases above illustrate that it is inherent to any individual's career that events and evolutions in the person and in their context affect a person's experiences and may bring along opportunities as well as needs, constraints, challenges, and dilemmas (see also Nagy et al., 2018). As the examples show, it is how people and the other stakeholders involved deal with those internal and external changes that might affect the sustainability of a career over time, as is also represented in Fig. 1.

Describing the major characteristics of sustainable careers is a first step in furthering our understanding of what makes a career (non-)sustainable. In the career literature there is an abundance of studies addressing a broad variety of outcomes of people's career decisions and experiences. These encompass both objective and subjective outcomes and are addressed from various perspectives such as values, needs-supplies fit, or career anchor theories (e.g., Schein, 1996). Given our process view on sustainable careers, in our conceptualization we focus on indicators rather than on discrete outcomes. Consistent with the conceptualization put forward above, we posit that sustainable careers are characterized by *mutually beneficial consequences* for the person and for their surrounding context, and should be considered by taking a *long-term perspective*. For instance, while a person's decision to accept a promotion might result in individual (both objective and subjective) career success in the short-term, from a sustainable career perspective this is only an indicator of a sustainable career if this promotion does not come at a cost of strain or fatigue, or stress in the home context. While the latter might not be apparent when considering outcomes in the short run, they might arise over an enduring period of considerable job or career demands. This means, for instance, that in the story of Emma, what might seem to be a sustainable solution at this point in her life – that is, taking the promotion – might turn out to be less sustainable in the long run, for instance when her work becomes too demanding or her husband is unhappy with his career choice leading to tensions at home. Therefore, to understand sustainable careers, taking one snapshot in time might be insufficient. In a similar vein, serious life events with an enduring character, such as serious illness of a loved one, may cause one's career to stagnate. Thus, using a systemic perspective, we argue that the different aspects of the system need to be aligned and balanced. In terms of individual sustainability of careers, this means there needs to be a strong person-career fit over time (Cha, Kim, & Kim, 2009).

In our framework we consider three groups of indicators of a sustainable career: *health*, *happiness*, and *productivity* (cf. Van der Heijden, 2005) (see Fig. 1). We see these characteristics as key for one's individual prosperity, yet they also form the main building blocks for the welfare of one's family and peers, the organization wherein one works, and society as a whole.

Health encompasses both physical and mental health, and refers to the dynamic fit of the career with one's mental and physical capacities. Physical demands can affect the sustainability of one's career over time, think for instance of the physical impact of shift work in manufacturing companies (Wang, Armstrong, Cairns, Key, & Travis, 2011), or the physical challenges for construction workers or for nurses (Bernal et al., 2015). While the physical demands of these jobs might not be impactful in the early years of a career, their impact on an individual's physical condition (e.g., back problems, ability to sleep well), might become apparent as one grows older and they may become even more impactful if less initiatives have been taken to preventively deal with these strains (e.g., by following a training in lifting techniques). The same holds for the impact of mental demands, which might only become apparent at a certain point in one's career when, for instance due to aging or an increase in demands, an individual is no longer capable of dealing with a stressful job and drops out due to a burnout (Khamisa, Peltzer, Ilic, & Oldenburg, 2016). Both physical and mental health thus form important indicators of the sustainability of careers.

With *happiness* we refer to the subjective elements of feeling successful or satisfied with one's career, yet seen from a broader life perspective. Happiness is an important goal for many people. In the light of our contribution, we argue that happiness concerns the dynamic fit of the career with one's values, career goals, or needs regarding work-life balance or personal growth (Sheldon, Kasser, Smith, & Share, 2002), which can be captured for instance through measures of subjective career success or career satisfaction. As these needs, and thus what contributes to feelings of career success or satisfaction, are likely to vary over the course of one's career, also this aspect of sustainable careers cannot be fully understood when only taking a snapshot in time. For example, while in the story of Emma it is clear that having a challenging job and making career progress is important for her at this point in her life, this might

change over time, making the fulfillment of other needs more important in order to feel satisfied with her career.

Productivity means strong performance in one's current job as well as high employability or career potential (Van der Heijde & Van der Heijden, 2006) in the future or in other jobs and hence refers to the dynamic fit of the career with organizational human capital needs. It also encompasses elements such as engagement and extra-role behaviors which are essential for the long-term performance of organizations. Again, both changes in the context and in the person, over time, are likely to affect what is needed to realize this productivity (Alavinia, Molenaar, & Burdorf, 2009). For example, for young workers it is important to master those skills that are essential to reach a high level of performance in a new job as a basis for securing employment. For older workers, the challenge might be to unlearn certain behaviors and learn new skills in order to keep pace with rapidly changing job demands due to digitization. Differently stated, the competencies that make a person employable and that contribute to productive performance in the short run might not automatically guarantee performance in the future or in different jobs. Individuals who are successful and rewarded for their strong performance at a certain moment in their career cannot automatically assume that this will remain so in the future if demands are changing.

These three characteristics of sustainable careers are equally important for the person as for the organization and the broader context, as indicated by the notion of fit. We thereby emphasize that it is the *dynamic* fit, that is, the capacity to adapt and change according to changing needs that is important to consider, as is also core in the definition of human sustainability (Holling, 2001). Hence, the notion of a dynamic person-career fit in terms of health, happiness, and productivity is at the core of sustainable careers.

The next step is to explore how such sustainability can be achieved. We do this by building on existing theoretical perspectives that are helpful for understanding the mechanisms underlying sustainable career development.

4. Theoretical perspectives for understanding sustainable careers

4.1. The importance of (conservation of) resources

Similar to environmental sustainability, resources are important for assuring sustainable growth and continuity in one's career (De Lange, Kooij, & Van der Heijden, 2015). Building on this, we argue that career sustainability comprises a process of preservation, as well as generation of resources across one's career span. Conservation of Resources (COR) theory (Hobfoll, 1989) is an important theoretical framework in this regard and encompasses a theory of motivation with the basic tenet that people are motivated to protect their current resources and acquire new resources (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014). The first principle of COR theory (2001) is the *primacy of resource loss*, referring to the idea that "it is psychologically more harmful for individuals to lose resources than it is helpful for them to gain the resources that they lost" (Halbesleben et al., 2014, p. 1335). As an extension of the conservation tenet, the second principle of COR theory is *resource investment* stating that people invest resources for three reasons: (1) to protect against resource loss; (2) to recover from resource loss; and (3), and to gain resources in their own right (Hobfoll, 2001).

While much previous scholarly work has typically applied COR theory in the context of predicting stress and well-being (Bakker & Demerouti, 2017), COR theory also enables us to further our understanding of sustainable careers, thereby combining the resource conservation and investment principles of COR theory (Ng & Feldman, 2012). More specifically, to the extent that a resource can help an individual to attain a career goal or to satisfy a need, according to the principle of resource investment in COR theory, it should have greater value to the individual. However, at the same time, following the principle of the primacy of research loss, one's career sustainability will be more likely preserved in case one manages to adjust well to losses. As such, we argue that those individuals who proactively react to internal and external forces by investing in conserving and acquiring alternative, beneficial resources, will be better able to protect the sustainability of their career, for example through safeguarding higher levels of well-being (i.e., *happy and healthy*) and performance (i.e., *productivity*).

To illustrate, in the case of Jamal, it could be argued that he first went through a clear resource gain cycle, in which he finished school, got a good job, and received awards for his efforts. This gain of resources allowed him to thrive, thereby contributing to his career sustainability. However, when his injury took away many of his resources, he went through a resource depletion process that severely undermined the sustainability of his career, as evidenced by his long-term unemployment and diminished mental well-being. This example demonstrates how resource gain and loss processes that take place over time can impact one's career sustainability. Hence, we argue that COR theory offers a comprehensive framework that can help to understand the mechanisms that underlie sustainable careers.

4.2. Motivational mechanisms and self-determination

Another important strategy to protect and further enhance one's career sustainability is to portray proactive behavior and individual growth. Self-Determination Theory (SDT) (Ryan & Deci, 2000) states that the proactive, growth- and development-oriented individual interacts with their surrounding social world, when striving for the fulfillment of three innate psychological needs, i.e., the need for autonomy, competence, and relatedness (Gagné & Vansteenkiste, 2013; Ryan & Deci, 2000). In particular, SDT provides an overall framework, using three important building blocks that can be used for the further conceptualization of sustainable careers. First, individuals are inherently proactive and have the tendency to act in order to master both internal and external forces, instead of being passively controlled by those. Second, they have an inherent tendency towards growth, development, and integrated functioning. Third, individuals may actualize their capabilities in a proactive way, but they need a supportive environment (Ryan & Deci, 2000) that provides resources (referred to as 'nutriments' in SDT) and, as such, support activity, growth, and psychological well-being. In the case of Emma, for example, both at work (mentor) and at home (husband) she found a supportive environment that

recognized her need for career growth and respected her autonomy in her career decisions and this helped her to realize person-career fit.

In line with COR theory and SDT, we stress that, in order to have a sustainable career, it is highly beneficial for individuals to interact with their surrounding stakeholders when striving for the fulfillment of their psychological needs (i.e., autonomy, competence, and relatedness) (Gagné & Vansteenkiste, 2013; Ryan & Deci, 2000) and coping with changing motivation and goals throughout the life-span. Thus, realizing and retaining person-career fit (Parasuraman et al., 2000) is a dynamic process and can be realized through thoughtful interaction with their stakeholders in order to bring about resource gains (Hobfoll, 2001). Typically, resource gains comprise a pattern in which resources are associated with other resources, thereby creating so-called resource caravans (e.g., Westman, Hobfoll, Chen, Davidson, & Laski, 2004). For example, Wittekind, Raeder, and Grote (2010) showed that perceptions of employability – considered as a personal resource – were positively related to other resources, such as education or job training. In a similar vein, sound psychological functioning is related to other resources such as autonomy (Ryan & Deci, 2000). The cumulative nature of resources in the form of resource caravans implies that individuals with (many) resources are better able to gain additional ones, that is to say, initial resource gain begets further gain, herewith inducing a gain spiral (Westman et al., 2004).

For instance, individuals who are employed have more easy access to additional resources, such as income, social networks, and support from stakeholders at the workplace, which promotes their career sustainability. In addition, resources in one's private life, such as a stable and happy relationship, are highly important as well (Demerouti, Peeters, & Van der Heijden, 2012). In this regard, one's career sustainability is strongly related to the way in which individuals utilize their resources and proactively shape their careers (Akkermans & Tims, 2017). However, there is also a potential 'Matthew effect' in play here: if people with ample resources are more easily able to gain additional resources and satisfy their needs of autonomy, competence, and relatedness as means of enhancing their career sustainability, this also implies that those who end up in a resource loss cycle will find it increasingly more difficult to satisfy those needs, thereby creating a situation in which "the weak get weaker and the strong get stronger" (cf. Forrier, De Cuyper, & Akkermans, 2018). Thus, it is crucial for all stakeholders involved to monitor the resources that people have and the needs they fulfill as core foundations of their health, happiness, and productivity, that is, their career sustainability.

To illustrate, Barbara wanted to combine her career aspirations with her first priority in life at that time, that is, caregiving for her father. In her case, it is likely that the fact that she shaped her working conditions by making formal agreements was key. This not only responded to her personal needs but also supported her relatives. By assisting her father in the hospital she freed up time and energy for them as well to juggle with all their work and private life demands. This likely enabled the family to protect unnecessary resource losses for all parties involved, for instance due to daily commuting time to work and to the hospital. As such, this very particular integration of work and private life boundaries as a result of her agreement to work from the hospital when possible, enabled her to satisfy her needs for autonomy (reflected in trust by her employer), competence (to do her job well), and relatedness (to spend as much time as possible with her loved ones), and also protected her and her relatives from further resource losses.

4.3. Life-span perspectives

Inherent in our conceptualization of a sustainable career is that it is a dynamic process evolving over time. The life-span theories of Selection Optimization and Compensation (SOC) (Baltes, Staudinger, & Lindenberger, 1999) and Socio-emotional Selectivity Theory (SST) (Carstensen, 1995, 2006) offer relevant theoretical perspectives to further our understanding of sustainable careers as they explain how goals change over the life-span. First, SOC theory (Baltes et al., 1999) states that individuals maximize the gains and minimize the losses they experience over time, by using different strategies. To maximize gains, individuals select desirable outcomes or goals (i.e., elective selection), and optimize their resources (cf. COR theory; Hobfoll, 2001) to reach these desirable outcomes. To minimize losses, individuals select fewer goals in response to these actual or impending losses, and compensate for these losses by investing their remaining resources in counteracting these losses (cf. primacy of resource loss). By employing these strategies, individuals strive to achieve three different life-span goals: (1) growth (i.e., reaching higher levels of functioning); (2) maintenance (i.e., maintaining current levels of functioning or returning to previous levels of functioning); and (3) regulation of loss (i.e., functioning adequately at lower levels). SOC theory further proposes that the allocation of resources aimed at growth will decrease with age, whereas the allocation of resources used for maintenance and regulation of loss will increase with age (Baltes et al., 1999). For instance, in a study by Freund (2006), regulatory focus was found to shift from emphasizing promotion in young adulthood to focusing on maintenance and prevention in later adulthood.

In a similar vein, SST (Carstensen, 1995, 2006) proposes that age-related changes in the perception of time result in changes in social goals or motives, thereby shifting the motive for social interaction from gaining resources (i.e., instrumental) towards receiving affective rewards (i.e., emotional) and strengthening one's identity. Whereas instrumental goals involve knowledge acquisition, autonomy, social acceptance, and status attainment (see the case on Emma having strong career ambitions), emotionally meaningful goals involve generativity (see the case on Jamal who used his expertise for training young, talented baseball players), emotional intimacy, and feelings of social embeddedness (Lang & Carstensen, 2002) (see the case on Barbara who wanted to spend more time with her ill father).

Moreover, over the course of one's career, an individual's goals tend to alter due to a changing future time perspective (FTP) (Lang & Carstensen, 2002), and this may make them more concerned with preserving certain resources (e.g., safeguarding their current job) while becoming less inclined to invest in new resources (e.g., to create new career opportunities). Thus, the value of a particular resource – and even the saliency of the resource gain vs. resource loss principles of COR theory – are likely to vary significantly over time and across different contexts, including one's (biological or subjective) age (cf. Le Blanc, Van der Heijden, & Van Vuuren, 2017) and personal circumstances. In addition, over time, changes are not only likely to take place within the individual but also within the

broader context in which the individual's career develops – for example an employing organization going through a major restructuring. A person who manages to cope with these kinds of changes, in this case implying losses of valuable resources, will be more likely to protect the sustainability of their career.

In case Jamal would not open up his life for a new challenge, he might have been trapped in his depression for many years, which might have caused him more drinking, herewith obviously increasing the risk to lose his marriage. It is exactly this marriage and his former colleague that are likely to have played a considerable role in providing him with the necessary social support to go on, to start believing in his employability again and to search for a new purpose built around the motive of generativity. Seeing his rising baseball playing stars flourishing has made Jamal a happy, healthy, and productive individual again.

All in all, life-span theories help us to understand the sustainability of careers especially from the perspective of changes that occur during the life-span based on evolving motivations and attitudes. In this sense, it has clear connections to both COR theory (i.e., which resources to focus on) and SDT (i.e., what are the main motivational factors guiding behavior) in providing a useful framework for better understanding the mechanisms that contribute to sustainable careers in terms of health, happiness, and productivity. Below, we will further elaborate on these mechanisms, and the indicators of sustainable careers provided earlier, by examining the key dimensions that can be used to analyze sustainable careers.

5. Dimensions for analyzing sustainable careers

Thus far, we have discussed what we contend to be key indicators and theoretical mechanisms related to sustainable careers. As a next step, and to understand *what* makes a career sustainable, we distinguish three critical dimensions that can be used to analyze the sustainability of careers (see Fig. 1): the person, the context, and time. First, the *person* is the central actor in the definition of sustainable careers. It is hence important to understand how individuals, through their actions and the interpretations they give to experiences, affect the sustainability of their careers. Second, careers are affected by the *multiple contexts* in which they evolve: the work context, but also other layers of context, such as the private life context, the occupational sector one belongs to, the broader labor market context, and one's society and culture. This makes it important to understand how individuals deal with the opportunities and constraints in these different layers of context and with the stakeholders involved. Third, careers evolve over *time* and thus it is important to consider what makes a career sustainable across the life-span, thereby considering both intra-individual changes as well as changes occurring within the different layers of context. We discuss the three dimensions in more detail below.

5.1. "Person" dimension (person-centered approach)

The psychological literature on careers typically considers careers from an individual perspective. Building on the definition of a career as a sequence of work experiences and activities over a person's life-span (Arthur, Hall, & Lawrence, 1989), career management is used to refer to those individual activities that shape a person's career transitions and experiences (Wang & Wanberg, 2017). Consistent with the earlier conceptualization of a sustainable career (Van der Heijden & De Vos, 2015), we consider agency and meaning as relevant elements of this dimension. First, the individual, being the central actor and 'owner' of the career, has a major impact on the sustainability of their career through proactivity and control (e.g., making choices in line with one's interests, taking actions to negotiate about a promotion, taking initiative to pursue additional training) but also through adapting and reacting to career events and changes (e.g., reacting to a changing job content due to digitization, lowering one's ambitions in order to meet family demands) (see also Fig. 1). Both types of actions imply agency, yet agency can vary from very proactively taking charge (e.g., taking the initiative to make agreements with her husband as in the case of Emma) to very reactively adapting to a situation that is not under the person's control (e.g., changing to a generativity role following a serious health injury as in the case of Jamal). Hence, a sustainable career is as much about proactive shaping (e.g., career crafting; Akkermans & Tims, 2017) as it is about adjustment and dealing with external influences (e.g., career adaptability; Hirschi, Herrmann, & Keller, 2015).

Second, in order to have a career characterized by happiness, health, and productivity, it is important for the person to be mindful about who and what matters to them in their career (Van der Heijden, 2005), making meaning an important element. Although personal needs and the values of specific career and private life outcomes may vary over time, they form important anchor points against which to make career decisions that increase the likelihood of person-career fit. Indeed, when individuals experience their working life as meaningful, this is likely to positively impact, among other things, their motivation, commitment, engagement, and life satisfaction (Hu & Hirsh, 2017). In addition, experiencing meaning in their career will provide them with a clear sense of purpose and mission (Steger, Dik, & Duffy, 2012). These aspects of personal meaning of a career are dynamic and idiosyncratic to the person within his or her particular life and work context. Furthermore, people may have different orientations in terms of how they see their work (Wrzesniewski, McCauley, Rozin, & Schwartz, 1997): as a job, thus not per se as a major positive element of their life, with a focus on financial rewards and necessity rather than pleasure or fulfillment, as a career, hence focusing on advancement, or as a calling, that is, focusing on enjoyment of fulfilling, socially useful work. Career choices that are made while being mindful about these personal and contextual needs and possibilities will be more likely to contribute to a sustainable career.

Seen from the perspective of agency and meaning, a person's career competencies and career adaptability are important for analyzing a sustainable career. First, *career competencies* are knowledge, skills, and abilities that are central to career development, and consist of a reflective, a communicative, and a behavioral component (Akkermans, Brenninkmeijer, Huibers, & Blonk, 2013). By reflecting on one's motivations and skills, building a professional network and profiling one's strengths, and by planning and exploring opportunities, individuals can for example prepare for major transitions in their career (e.g., Mayotte, 2003), achieve higher levels of career success (Kuijpers, Schyns, & Scheerens, 2006) and become more engaged in their work (Akkermans, Schaufeli,

Brenninkmeijer, & Blonk, 2013). Second, *career adaptability* – or the psychosocial resource for coping with current and anticipated career-related tasks, transitions, and traumas (Savickas & Porfeli, 2012) – constitutes a self-regulatory, transactional, and malleable resource that enables workers to successfully solve unfamiliar, complex, and ill-defined problems throughout their careers (Hirschi et al., 2015; Savickas & Porfeli, 2012). Workers with high levels of career adaptability prepare for future career tasks (concern), take responsibility for their career development (control), explore possible future selves and career opportunities (curiosity), and believe in their ability to succeed in solving career-related problems (confidence). Indeed, those with high levels of career adaptability show more adaptivity (e.g., self-esteem), adapting (e.g., career planning), and adaptation (e.g., engagement, employability) in their careers (Rudolph, Lavigne, & Zacher, 2017). Together, career competencies and career adaptability are important building blocks for analyzing the sustainability of careers in terms of the person as the central actor.

5.2. Context dimension ("systemic approach")

Careers cannot be understood while disregarding the context in which they unfold. Some authors consider these different layers of context as perspectives to understand employees' career decisions (e.g., Feldman & Ng, 2007). These perspectives consider the roles of, among others, work group level factors, organizational policies and procedures, occupational labor market factors, and structural labor market factors. In addition to these work-related contexts, also the private life context is important to include (Greenhaus & Kossek, 2014). This raises questions as to how different stakeholders, residing in the individual's broader social space (e.g., employers, employees, and one's relatives), may help to protect and enhance sustainable careers across the life-span.

To illustrate, at the *work group level*, employees have to deal with fluctuations in job demands and job resources that are prevalent at work (Bakker & Demerouti, 2017). A sound alignment between increasing job demands with, for instance, constructive social support systems by one's near colleagues and direct supervisor hence contribute to a sustainable career. One's work group might also affect the sustainability of a person's career through prevailing norms about 'normal' career transitions (Lyons, Schweitzer, & Ng, 2015) and through its diversity climate (see Zanoni, Janssens, Benschop, & Nkomo, 2010). For example, work contexts characterized by a negative climate in terms of racism, sexism or homophobia might make it hard for some people to realize their career goals (Trau, 2015), while an inclusive work climate might facilitate sustainable careers. At the *organizational level*, HR-policies and practices have a powerful influence on individuals' careers, both directly by creating opportunities or by setting boundaries to what is possible in terms of career progression, development, and flexibility, and indirectly by supporting individuals' capacities to self-manage their careers (De Vos, Dewettinck, & Buyens, 2009). With organizations operating in an increasingly unpredictable context, the way they deal with the careers of their employees might have significant consequences for the sustainability thereof, for example when an increased emphasis on external hiring takes away employees' opportunities for career development. In an era of growing occurrence of non-standard forms of employment (such as independent professionals, project-based or contract workers; Kalleberg & Marsden, 2015), it is important to broaden the traditional employer-employee perspective to include the influence of the organizational context upon the sustainability of these non-standard groups of individuals' careers and to address the inclusiveness of career management practices (Trau, 2015).

Next, both organizations and individuals are also affected by the *occupational sector and institutional context* in which they operate as, depending on one's occupation, technological changes such as digital transformation might have a more substantial impact on the sustainability of one's career. Think for instance of technological advancements impacting the jobs of accountants, administrative support staff or cashiers (Frey & Osborne, 2017). These evolutions not only impact particular occupations but also affect particular sectors, for example the retail sector undergoing transformations due to the rapid growth of e-commerce or the hospitality sector being affected by the platform of Airbnb (Zervas, Proserpio, & Byers, 2017). These disruptive changes have consequences for the individuals working within them, as their jobs are likely to change or even disappear, making some competencies obsolete while raising the need for new competencies (Quendler & Lamb, 2016). Together, these consequences might challenge the career sustainability of many workers. At the *national* level, legislations and the institutional environment in general affect careers and the sustainability thereof (De Vos, Dujardin, Gielens, & Meyers, 2016). For instance, the extent to which employees and employers interact to negotiate wages, income security or opportunities for career breaks differ across countries. In addition, national guidelines and cultures regarding, for example, education and training systems, welfare supports for parents with dual careers, and retirement systems are likely to have a significant impact on the sustainability of careers (De Vos et al., 2016).

Finally, the *private life context* affects career sustainability. For instance, for dual earner workers, as in the example of Emma, there are challenges regarding allocating time to commitments at work and at home (Greenhaus & Kossek, 2014). Within dual earner families, the spouse or life partner has been identified as an important stakeholder of the person's career, who both affects and is affected by the latter's career decisions and career management (e.g., Greenhaus & Powell, 2012; Schooreel, Shockley, & Verbruggen, 2017). Also children, parents, and friends can affect individuals' career sustainability through the support they provide to the person or the social influence they exert upon an individual's career decision-making. Therefore, to fully understand what makes a career sustainable it is important to look beyond the organizational context and to address how stakeholders in other contexts interact in affecting a person's career for instance through aligning the infrastructure of today's workplace with a person's needs in terms of work-life balance (Williams, Berdahl, & Vandello, 2016). Dealing with the opportunities, needs, constraints, challenges, and dilemmas stemming from the (variety of stakeholders within the) context, and evolutions or changes therein, will be more 'easy' if the person is mindful of both personal and contextual needs. By focusing on the interaction between the person and their context when dealing with career sustainability, we go beyond the focus on agentic careers that has dominated the recent career literature (Akkermans & Kubasch, 2017) and bring back the role of different layers of context in which careers are enacted.

5.3. Time dimension ("dynamic perspective")

The third dimension we consider for understanding sustainable careers is time. Rather than a static, momentary view on people's work-related positions and experiences, the perspective of a sustainable career captures how these positions and experiences evolve – or, conversely, remain stable – over time. That is to say, sustainable careers imply a cyclical, self-regulatory process (Lord & Maher, 1990) wherein individuals can capture opportunities for 'dynamic learning', by adapting to both positive and negative events, within their personal and broader context, over time. As such, building on the general notion of sustainability, sustainability in careers implies protecting and fostering (rather than depleting) human and career development (Greenhaus & Kossek, 2014; Newman, 2011; Van der Heijden & De Vos, 2015) through redefining person-career fit over time (Parasuraman et al., 2000).

While some career experiences might have immediate impact on the individual's career sustainability, the impact of other events, choices, or, rather, lack of action, might only show its consequences after a longer period of time. For example, a lack of following any extra training or development programs to broaden one's competencies might only become a danger for productivity at a moment when the current job is made redundant. Moreover, just like age, time can have different meanings for an individual, their stakeholders, and for different types or categories of workers. For instance, with the growing life expectancy in Europe, the norms about career length are increasing towards 40+ years, while many self-employed people, being a specific category of workers, manage to continue their business as healthy, happy, and productive workers, in some cases until far in their seventies. This is also reflected in Hall's (1996) idea of learning cycles: depending on one's occupation, the learning curve to master all competencies for a certain position or role will be different – for instance, think about a surgeon vs. a cashier.

In career development, time is also an important intra-individual factor, as has been elaborated in career dynamics research, which considers the temporal perspectives of past, present, and future (e.g., Levinson, 1986; Super, 1957). Career dynamics may refer to both processes of development within a job or within a position over time, as well as across jobs or positions over the individual life cycle (Super, 1957). Otherwise stated, a sustainable career is not an end state but rather a characteristic or a relevant parameter to describe a career as it evolves over time. Moreover, it is not a permanent characteristic either, as a person's career might be more sustainable in the early years but become less sustainable over time (e.g., when a person stops developing new competencies or works too many hours at the expense of one's personal health resulting in a burnout), or the other way around (e.g., when a person develops new competencies through work, enhancing one's employability resulting in career progress).

Periods of non-sustainability, whether in one's early or later career stage, may be overcome again. Coping mechanisms are very important here and might explain why some individuals recover from a negative or unsustainable career period by learning, showing adaptive behavior, increasing self-awareness, and search for a better P-E fit (Kristof, 1996), while others might not learn from this, and fall back to the situation that made them sick, or never overcome the negative impact on their self-esteem (see also Cai et al., 2015). Obviously, one's career resilience (Mishra & McDonald, 2017) – which is an increasingly important but understudied aspect of nowadays' career – is crucial in this regard. Thus, the career is not limited to a linear sequence of uninterrupted work positions but can imply varying degrees of changes across jobs, organizations, occupations, and employment status. That is, as explained before, a sustainable career is a cyclical, self-regulatory process, for which building up, enhancing, protecting, and conserving all kinds of resources are of utmost importance.

5.4. Integrative and dynamic view of the sustainable career concept

Obviously, the above-mentioned dimensions of person, context, and time cannot be studied in isolation. Therefore, we argue that in theorizing and empirical work on sustainable careers, an integrative and dynamic perspective ought to be taken, as might already have become clear from our description of each dimension. Here, we provide once concrete example of how the dimensions of person, context, and time interact in shaping the sustainability of one's career: the occurrence of *career shocks* (e.g., Bright, Pryor, & Harpham, 2005; Seibert, Kraimer, Holtom, & Pierotti, 2013). Career shocks can be characterized as disruptive and extraordinary events that are, at least to some degree, caused by factors outside the individual's control and that trigger a deliberate thought process concerning one's career (Akkermans, Seibert, & Mol, 2018). Shocks can differ in various ways, for example regarding their valence (i.e., positive or negative), frequency, duration, and intensity. For Jamal, for example, a negative and intense shock was his injury at the age of 26 that forced him into early retirement. Running into his former teammate unexpectedly turned out to be a rather positive career shock for Jamal, which helped him to recover from his depression. Emma's unanticipated pregnancy was a positive shock but also challenged her in balancing career and private life, while for Barbara hearing about her father's illness came as a significant negative shock. Career shocks can occur at various points in one's career, and in this way can be considered as events that happen over time. Yet, career shocks do not 'just happen' to individuals but, following the above-mentioned definition, are interpreted in a certain way and cause a deliberate thought process (Akkermans et al., 2018; Lee & Mitchell, 1994; Seibert et al., 2013). Hence, the focal person's personality, career competencies and adaptability, and agentic orientation have a significant impact on how individuals deal with these shocks. Furthermore, career shocks can occur in different types of contexts (e.g., Scott & Hatalla, 1990), for example following a major lay-off at work vs. an unexpected pregnancy in one's private life. Thus, the *context* in which such a shock takes place interacts with the point in *time* of a person's career it happens, and with the way the *individual* deals with the particular shock. Together, they can have a significant impact on the sustainability of one's career.

6. Sustainable careers: a future research agenda

We hope that this conceptual article inspires scholars who are interested in moving the research and knowledge on sustainable

careers forward. In this section, we outline avenues for further conceptual, theoretical, and methodological future research.

First, in this article we have provided a further conceptualization of what characterizes a sustainable career, thereby distinguishing three key *indicators*: health, happiness, and productivity. We thereby emphasized that those indicators should not be considered in isolation, because they are interrelated and together they characterize the sustainability of careers. Following from this, we recommend researchers to include all three types of indicators when studying sustainable careers. For example, while studying outcomes such as work ability (i.e., health), engagement (i.e., happy), and performance (i.e., productivity) is an important endeavor in its own right, we argue that they should be studied in tandem in order to examine the overall sustainability of one's career. Moreover, as these indicators can vary over time due to intra-personal or contextual changes, it is crucial that research captures this dynamic perspective instead of taking a snapshot in time. This integrated and dynamic perspective implies that longitudinal research is needed in order to draw any conclusions about long-term sustainability of careers. Hence, we believe that a next valuable step in moving the field further is to jointly research the indicators of a sustainable career (i.e., health, happiness, and productivity), and to analyze the interactions between these indicators and changes over time.

Second, our conceptual model shows three key *dimensions* that can be used to study sustainable careers: person, context, and time. Research addressing possible interactions between these dimensions will be important to advance our knowledge of how factors related to each of these three dimensions might uniquely and interactively affect the sustainability of a career. We thereby call for research building upon the theoretical perspectives that have been outlined earlier in order to better ground sustainable career research in existing and sound theoretical frameworks. For instance, research on the possible effect of career shocks – being an impactful event at a certain moment in time – on a person's health, happiness, and productivity will increase our insights into the role of unplanned career events on career sustainability. This will contribute to our knowledge on the interaction of the three key dimensions (e.g., shocks can be different across contexts and time, and each person might deal with them differently) and theoretical perspectives (e.g., negative shocks might cause a resource loss process). Another example of a concrete avenue of future research in this regard comprises the role of contextual factors, such as one's private and broader social support system in coping with such shocks over time, and how this coping process affects one's health, happiness, and productivity. It is also fruitful to investigate the possible role of one's personality, capabilities and competencies, one's orientation towards work as a calling versus a job or a career, and one's (self-perceived) employability in dealing with career shocks. Taken together, we urge researchers to adopt a systemic perspective in which person, context, and time-related factors might dynamically interact to ultimately impact the sustainability of a career. We have used career shocks here as an example of the three dimensions for analyzing sustainable careers, yet these possibilities apply to a plethora of potential research avenues, such as HR policies, major career transitions, career crafting behaviors, and many others.

Third, given the variety of types of employment in our current economy and the rise of alternative work arrangements (cf. Kalleberg & Marsden, 2015), challenges pertaining to the sustainability of one's career hold for all categories of working individuals: employees in regular organization-based employment, temporarily employed or contingent workers, self-employed individuals, as well as independent workers operating outside of organizations and in established professions (see for instance Barley, Bechky, & Milliken, 2017). Although we would argue that the indicators of sustainability – that is, health, happiness, and productivity – are applicable regardless of the type of employment, the outlook of the dimensions of person, context, and time is likely to differ significantly across the distinguished categories of workers. As a result, the dynamic process impacting the sustainability of careers is also likely to be different across types of worker groups. This will be the case in the types of employment that we described above, yet it also applies when we differentiate between a broader perspective of worker groups, such as blue collar vs. white collar workers, workers in different types of industries, and workers of different age groups. From a diversity perspective, it will be important to further address how the sustainability of employees belonging to minority groups is affected by elements such as workgroup climate or inclusive HR practices at the organizational level. Hence, future research on sustainable careers should be performed in a large variety of employment and worker types, thereby specifically examining the unique context in which their careers evolve. Such studies could be designed in various ways (cf. Johns, 2006). For example, comparative cross-level research could be used to study group or team, organizational, sectoral, or institutional contexts that vary in important dimensions (e.g., support for development, degree of digitization, policies regarding work-life balance) and the impact that these higher-level contextual factors have on the sustainability of individuals' careers, either directly or indirectly via their interaction with the person's career attitudes and behaviors. In doing so, it is important to explicitly theorize on and measure those contextual elements, and the theoretical frameworks that we have presented in this paper may offer starting points to develop hypotheses about such influences.

Fourth, more empirical work is needed to better understand intra-individual changes over time (e.g., changes due to aging, changes in one's personal context, changes in the organizational, occupational, or societal context across the working life) as well as inter-individual changes over time (e.g., people from different categories of workers are likely to differ in what matters to them in their job and the importance they attach to different types of work values or success criteria over the life-span) in view of career sustainability. With regard to intra-individual changes over time, we specifically call for the use of different approaches to aging, by including organizational, functional, psychological or life-span development age over and above chronological age (Sterns & Doverspike, 1989) as we believe this might affect the patterns of intra-individual changes (cf. Le Blanc et al., 2017). In terms of inter-individual changes, it would be important to compare different types of workers over time. As such, it is important for future research to also include multiple layers of context for instance by applying multi-group modeling in (large) cohort studies. In this regard, integrating the career literature with existing knowledge and approaches from sociology (cf. Kovalenko, 2017) might be a fruitful route to pursue.

Fifth, from a methodological perspective, we see several concrete possibilities for future research. Given our central conception of sustainable careers as a process, we need appropriate designs that enable us to examine how careers evolve over time and how

individuals act or adapt to changes or events affecting their career. More solid longitudinal research is needed to study the predictive validity of mediation models that are aimed at predicting a sustainable career, its underlying mechanisms, the role of possible moderators in these models, and its key indicators. In particular, because our process model views a sustainable career as an ongoing cycle of learning and adaptation, and of intra-individual and inter-individual changes in the person and their environment, the adoption of multi-wave full panel designs is particularly valuable. In addition, sophisticated time-sensitive analytical methods, such as lagged causal models and survival analysis (Kleinbaum & Klein, 2010) are especially useful in testing an integrative, dynamic model of sustainable careers.

Furthermore, both retrospective and prospective longitudinal studies are relevant in empirically studying sustainable careers. Retrospective designs, for example focusing on individuals when they retire, can provide further insight into the long-term processes of how (non-)sustainable careers have developed over time, the factors that affected these, as well as their inter-relatedness. The advantage of such an approach is the relative ease of obtaining a long-term perspective, yet, the disadvantage is that the reliability of memories might be questionable. To this end, prospective designs would provide unique insights into sustainable career development "in real time", tracking cohorts of workers over time and examining the key predictors and mechanisms of sustainable career development. Such empirical research may highly benefit from advanced, recently developed methodological techniques, such as complex longitudinal change models (e.g., Hofmans, Vantilborgh, & Solinger, 2017). In addition to quantitative retrospective and prospective designs, we also call for qualitative empirical research in this area. As the topic of sustainable careers is highly complex, it would be crucial to gain a more in-depth understanding of the processes and underlying mechanisms as a foundation for future theorizing. Again, innovative techniques, such as data mining (e.g., Kobayashi, Mol, Berkers, Kismihók, & Den Hartog, 2017) might be very promising to adopt in future research.

Overall, empirical research will need a sufficiently broad perspective, yet, needs to avoid lumping all elements from our model together in one study. No scholarly work can reasonably be expected to investigate all factors related to sustainable careers, yet empirical research on sustainable careers should have the potential to overcome the tendency to over-simplify the variables or relationships being studied by limiting its focus to the individual isolated from any context.

7. Conclusion

In this conceptual paper, we presented a dynamic process model, in which we argued that health, happiness, and productivity are the three core indicators of a sustainable career. Moreover, we contended that the dimensions of person, context, and time are key dimensions to examining sustainable careers. What sets the sustainable career paradigm apart from other existing career models is that we applied a systemic perspective in which we posited that it is the dynamic interplay between the person, their context, and changes over time, that together form the foundation for (non)sustainable careers. Furthermore, we provided suggestions for theoretical frameworks when analyzing sustainable careers, and we presented an agenda for future research in this area. In all, we hope that this paper inspires career scholars, as well as scholars from HR, OB and other fields, across the globe in their future research projects.

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