

**Future Work Selves:
How hoped for identities motivate proactive behaviour at work**

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Abstract

In this thesis I focus on individuals' agentic attempts to shape their future through proactive behaviour. Anticipating and envisioning a possible future is a crucial part of the sequence of interrelated acts and phases that constitutes proactive behaviour.

I draw on self-concept theory to investigate the role of visions of the self in the future in the motivation of proactive behaviour. Building on research on future selves (also termed "possible selves") I develop the concept of the "Future Work Self (FWS)", an imagined, hoped for, future identity that captures an individual's hopes and aspirations in relation to their work. I argue that FWS play an important role in the creation of discrepancies that underlie proactive behaviour, and facilitate the setting and pursuit of proactive goals.

I take two different approaches to exploring the link between FWS and proactive behaviour in samples of postgraduate research students. I focus on students' self-ratings of their proactive behaviours in a cross-sectional and a longitudinal study, and I content-analyse the goals students were currently pursuing in order to bring about their FWS.

The findings of this thesis provide initial support for the usefulness of the concept of the FWS in the motivation of proactive behaviour. In particular, the clarity of the FWS evolved as a significant predictor of proactive behaviours and goals. This emphasises the importance of processes of anticipation and mental simulation in the proactive behaviour process, and has practical implications for those aiming to enhance individuals' proactive attempts to shape their environment, and their future.

This thesis integrates the concepts of identity and self-concept into the literature on proactive behaviour and suggests directions for future research on individuals' future-oriented identity work.

Keywords:

Proactive behaviour, proactivity, future selves, possible selves, proactive career management, career self-management, P-E fit proactivity, self-concept, (career) identity, future orientation

Conference papers arising from the thesis

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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

Overview of the Thesis

In Chapter 1, I first provide a definition of proactive behaviour in organizations and a broad overview over the array of proactive behaviours studied in the literature, and their most prominent antecedents and consequences. I then discuss the usefulness of traditional motivation theories for our understanding of the regulation of proactive behaviour. I review process models of proactive behaviour in the literature and explore the role of goals in existing theories of proactivity. Finally I introduce a recent model of the setting and pursuit of proactive goals as an overarching framework of the motivation of proactive behaviour.

In Chapter 2 I focus on the under-investigated role of the anticipation phase in the proactive behaviour process and set out to answer the question how proactive goals are generated and pursued. I introduce the self-concept, in particular the concept of the future self, as a motivator of proactive behaviour. I review the literature on future selves or possible selves before developing the more specific concept of the future work self, and exploring its role in the setting and pursuit of proactive goals. The resulting model of future work selves and proactive goals forms the basis of the empirical part of this thesis.

In Chapter 3, I describe the methodological approach to the assessment of future selves adapted in this thesis. I define the context of the empirical research undertaken and describe the chosen sample. I then discuss the advantages and disadvantages of the chosen data collection technique, and describe the cross-sectional and longitudinal samples the empirical part of this thesis is based on.

In Chapter 4, I focus on the relationship between personal future work selves (FWS) and proactive career management. I explore the relationship between personal FWS and (self-rated) proactive career behaviour and feedback seeking behaviours, and contrast personal FWS with a more present-oriented career identity and a more general orientation towards the future.

Chapter 5 describes the development of coding instructions that allow for the reliable rating of personal FWS narratives through two independent raters. In this chapter, I explore whether the self-rated characteristics of the

FWS are reflected in the characteristics of the FWS narratives and whether FWS narratives make a unique contribution to our understanding of the motivation of proactive behaviour, focusing on both self-rated proactive behaviours and on proactive goals.

In Chapter 6, I broaden the theoretical framework of the previous chapters by focusing on three different proactive behaviours that form part of person-environment (P-E) proactivity, and address the relationship of self-rated characteristics of personal FWS and characteristics of FWS narratives with the three P-E fit proactive behaviours in a two-wave longitudinal study.

The focus of Chapter 7 is twofold. It focuses on avoidance in FWS narratives, the extent to which FWS contain feared rather than hoped for elements, and explores the effect of avoidance in FWS narratives on proactive goals. In addition, it explores the relationship between individuals' affect and three different characteristics of FWS: their accessibility in the memory, the uncertainty of the narrative, and avoidance in the FWS narrative.

In Chapter 8 I integrate the findings of this thesis and draw a general conclusion on the contribution of the concept of future selves for our understanding of proactive behaviour. I outline the theoretical and practical implications of this work, before discussing its limitations and laying out directions for future work.

1 Chapter 1 – Proactive behaviour in organizations

1.1 Introduction

In recent decades, the field of Organizational Behaviour has seen an increase in active conceptualisations of individuals' behaviour that more strongly account for the role of human agency. Proactivity is an overarching term for "self-generated activities" (Bandura, 1989, p. 1175) in organizations and in individuals' careers. As Bandura put it, such self-generated activities "function as important proximal determinants of motivation and action. [...] Because judgments and actions are partly self-determined, people can effect change in themselves and their situations through their own efforts." (1989, p. 1175).

Proactive behaviours can range from seeking critical feedback on one's performance to suggesting an improvement in work procedures to the top management team of one's organization, and can effect change in the self, the job, or the organization as I will discuss below.

Scholars in the field of proactivity abandon more traditional conceptualisations of work behaviour and performance that "assume that employees (ought to)¹ follow instructions, task descriptions, and orders" (Frese, 2008, p. 67) and adapt a more agentic view of human behaviour (Grant & Ashford, 2008).

In this thesis I contribute to the literature on proactive behaviour in two ways. I focus on the under-investigated the role of anticipation and mental simulation in the setting and pursuit of proactive goals, and I introduce the self-concept, in particular the concept of the future self, as a motivator of proactive behaviour.

¹ Parentheses added

1.2 Proactive behaviour in organizations – A review of the literature

1.2.1 Defining features of proactive behaviour

When individuals engage in proactive behaviour, they take self-directed action to anticipate or initiate change in themselves, the work system or work roles (Grant & Ashford, 2008). Crant (2000) defines proactive behaviour as “taking initiative in improving current circumstances or creating new ones”. It involves “challenging the status quo rather than passively adapting to present conditions” (p. 436). Proactivity is an active performance concept (Frese & Fay, 2001) that considers employees as agents who pursue self-set goals (Roberson, 1990).

Research on proactivity has mainly emerged phenomenon-driven (Grant & Ashford, 2008) and un-integrated (Crant, 2000). However, more recently researchers have aimed to integrate streams of research on different proactive behaviours (Parker, Bindl, & Strauss, forthcoming), and there is an emerging consensus regarding the defining elements of proactive action at work (Grant & Ashford, 2008; Parker & Collins, 2009).

Proactive behaviour is anticipatory. It is directed towards the future (e.g., Ashford & Cummings, 1983; Crant, 2000; Frese & Fay, 2001; Grant & Ashford, 2008). Proactive behaviour requires the active anticipation of challenges rather than the passive adaptation to demands once they have occurred. Proactive employees “direct their actions toward future impact” (Grant & Ashford, 2008, p. 18) and often also consider the potential long term impact of their behaviour.

Proactive behaviour is self-starting; that is, actions are initiated by the individual (Crant, 2000; Frese, 2005; Frese & Fay, 2001; Frese, Fay, Hilburger, Leng, & Tag, 1997; Grant & Ashford, 2008; M. A. Griffin, Neal, & Parker, 2007). Proactive goals cannot be assigned; they are always self-set (Frese & Fay, 2001). Even when employees are encouraged to “be proactive” the path they choose cannot be specified (Frese & Fay, 2001; Frese, 2005). The self-started quality of proactive behaviour implies that individuals need to generate goals to behave proactively themselves.

Proactive behaviour involves change to improve the self or the situation (Crant, 2000; Parker et al., 2006; Grant & Ashford, 2008). Through proactive behaviours individuals intend to make a difference by changing the status quo, rather than by adapting to change that has already occurred or was initiated by someone else (Crant, 2000; Grant, 2008).

1.2.2 Targets of proactive behaviour

Since research on proactive behaviours has mainly emerged phenomenon-driven (Grant & Ashford, 2008), there is conceptual overlap between different types of proactive behaviour. For example, Choi (2007) identifies conceptual overlap in the concepts of personal initiative (Frese & Fay, 2001), task revision (Staw & Boettger, 1990), voice (Van Dyne & LePine, 1998), innovative behaviour (Scott & Bruce, 1994), and taking charge. Throughout this thesis I focus on a number of different proactive behaviours, and I distinguish between proactive behaviours targeting the environment, and proactive behaviours targeting one's role or one's self.

Below, I provide an overview over the numerous types of proactive behaviour studied in the literature. The tables below make no claim to be exhaustive, but are intended to demonstrate the broad array of different behaviours that have been labelled as proactive behaviours in the literature or can be classified as proactive following the definition described above.

1.2.2.1 Proactive behaviour targeting the environment

Proactive behaviour can be targeted at either the self or the environment (Belschak & Den Hartog, 2008; Belschak & Den Hartog, in press; Grant & Ashford, 2008; Parker & Collins, 2009). The majority of proactive behaviours in the literature centre around behaviours impacting one's role or task (Ashford & Black, 1996; Hacker, 1998, 2003; Morrison, 2006; Nicholson, 1984; Parker, Wall, & Jackson, 1997; Rank, Carsten, Unger, & Spector, 2007; Staw & Boettger, 1990; Wrzesniewski & Dutton, 2001), or one's immediate work environment, the team or the organization (Ashford, Rothbard, Piderit, & Dutton, 1998; Axtell, Holman, Unsworth, Wall, & Waterson, 2000; Axtell, Holman, & Wall, 2006; Dutton & Ashford, 1993; Dutton, Ashford, Lawrence,

& Miner-Rubino, 2002; Dutton, Ashford, O'Neill, Hayes, & Wierba, 1997; Dutton, Ashford, O'Neill, & Lawrence, 2001; Frese & Fay, 2001; M. A. Griffin et al., 2007; Howell & Boies, 2004; Howell & Higgins, 1990a, 1990b; Howell & Shea, 2001; LePine & Van Dyne, 1998, 2001; Morrison & Phelps, 1999; Parker & Collins, 2009; Parker, Williams, & Turner, 2006; Scott & Bruce, 1994; Van Dyne & LePine, 1998; Welbourne, Johnson, & Erez, 1998).

Crant's definition of proactive behaviour as "taking initiative in improving current circumstances or creating new ones" and "challenging the status quo rather than passively adapting to present conditions" (2000, p. 436) mainly focuses on proactive behaviour targeting one's environment, and Bateman & Crant (1993) define proactive personality² as the dispositional tendency to initiate change in one's environment. In their historic review of the emergence of proactivity research Grant and Ashford (2008) identify social processes, work structures, and development and change processes as areas in which proactive behaviour has been studied. In all of these areas, researchers have focused on "the creative ways in which employees deliberately plan and act to influence, change, and alter their environments" (Grant & Ashford, 2008, p. 6).

Proactive behaviours targeting the environment play an important role in the innovation process and contribute to organizational effectiveness (Crant, 2000; Rank, Pace, & Frese, 2004). *Individual innovation* (Axtell et al., 2000; Axtell et al., 2006; Scott & Bruce, 1994; Welbourne et al., 1998) and *championing of ideas* (Ginsberg & Abrahamson, 1991; Howell & Boies, 2004; Howell & Higgins, 1990a, 1990b; Howell & Shea, 2001) both refer to the generation and implementation of ideas for improvement in organizations. Similarly, individual, team member and organization member proactivity or *proactive work role behaviour* refers to initiating change, introducing new methods and making suggestions to improve performance on the individual, team or organizational level (M. A. Griffin et al., 2007). Other proactive behaviours refer more specifically to the generation and expression of ideas for

² Proactive personality will be discussed further as an antecedent of proactive behaviour below.

innovation and their implementation respectively (Mumford & Gustafson, 1988).

Voice refers to speaking up in a constructive manner and to making innovative suggestions for change (LePine & Van Dyne, 1998, 2001; Van Dyne & LePine, 1998). Individuals *taking charge* engage in voluntary behaviour aimed at change and improvement of procedures in the workplace (Morrison & Phelps, 1999). *Proactive idea implementation* can involve the self-implementation of ideas (Frese, Teng, & Wijnen, 1999), but also refers to attempts to improving the workplace by voicing one's idea to others (Parker et al., 2006). *Proactive problem prevention*, employees' behaviours that aim to prevent the reoccurrence of a problem, e.g. by addressing its root cause, can also involve voicing one's concern about work procedures or self-implementing changes (Parker et al., 2006).

On a more strategic level (c.f. Parker & Collins, 2009), employees engage in *issue selling* to raise the management's awareness of issues, trends or events they see as relevant for organizational performance (Ashford et al., 1998; Dutton & Ashford, 1993; Dutton et al., 2002; Dutton et al., 1997; Dutton et al., 2001). They scan their environments and seek information from diverse sources to generate innovative ideas (*strategic scanning* (Hambrick, 1982; Howell & Shea, 2001; Parker & Collins, 2009)).

Proactive behaviours initiating change in the environment can target different foci such as the team or the organization (Belschak & Den Hartog, 2008; M. A. Griffin et al., 2007; K. Strauss, Griffin, & Rafferty, 2009). They can affect individuals' immediate work environment or be more external in focus (Parker & Collins, 2009).

These behaviours are generally expected to benefit the organization, but they do not necessarily have to be motivated by pro-organizational motives. They can be pro-self focused or more pro-socially focused (Belschak & Den Hartog, 2008). For example, an employee making the organization's top management team aware of a new technology that could improve the organization's performance aims to initiate change in the organization, but may do so for self-focused reasons, e.g. because she hopes to advance her career. Other proactive behaviours initiating change in one's organization such as

environmental championing (Andersson & Bateman, 2000) or whistle-blowing (Near & Miceli, 1985, 1995, 1996) aim to initiate change not to necessarily to benefit oneself or the organization, but the environment or the general public.

Table 1.1.
Proactive behaviours mainly targeting the organization and exemplary publications

Voice	LePine & Van Dyne, 2001 LePine & Van Dyne, 1998 Van Dyne & LePine, 1998
Taking charge	Morrison & Phelps, 1999
Individual innovation	Axtell, Holman, Unsworth, Wall, & Waterson, 2000 Axtell, Holman, & Wall, 2006 Scott & Bruce, 1994 Welbourne, Johnson, & Erez, 1998
Championing of ideas	Howell & Boies, 2004 Howell & Higgins, 1990a, 1990b Howell & Shea, 2001
Change-oriented citizenship behaviours	Bettencourt, 2004 Choi, 2007
Issue selling	Ashford, Rothbard, Piderit, & Dutton, 1998 Dutton & Ashford, 1993 Dutton, Ashford, Lawrence, & Miner-Rubino, 2002 Dutton, Ashford, O'Neill, Hayes, & Wierba, 1997 Dutton, Ashford, O'Neill, & Lawrence, 2001
Idea implementation	Frese & Fay, 2001 Parker, Williams, & Turner, 2006
Problem prevention	Frese & Fay, 2001 Parker et al., 2006
Strategic scanning	Hambrick, 1982 Howell & Shea, 2001 Parker & Collins, 2009
Environmental championing	Andersson & Bateman, 2000
Whistle-blowing	Near & Miceli, 1985, 1995, 1996
Individual, team member, organization member proactivity	Griffin, Neal, & Parker, 2007 Strauss, Griffin, & Rafferty, 2009

1.2.2.2 Proactive behaviour targeting the role or the self

The proactive behaviours described above aim to impact the internal organization environment or more strategically the organization's fit with the external environment (Parker & Collins, 2009). Proactive behaviours can also be aimed at improving individuals' fit with their environment (Parker & Collins, 2009). Following Edwards (1996), Parker and Collins further distinguish between behaviours that increase an individual's fit with the

environment (demand-abilities fit), and behaviours that bring about a more suitable environment for an individual's values (supplies-values fit).

Proactive behaviours during organizational entry aim to achieve a fit between oneself and the environment. Behavioural (Saks & Ashforth, 1996) and cognitive (Ashford & Black, 1996) *self-management* during organizational entry aim to initiate change in the self. *Information seeking* and *feedback seeking* facilitate sense-making during organizational entry (Ashford & Black, 1996; V. D. Miller & Jablin, 1991; Morrison, 1993a, 1993b) and provide information used to shape and adapt one's behaviour.

Individuals aim to adapt to future environments by building resources to be able to respond to future stressors (*proactive coping*, Aspinwall & Taylor, 1997), or by proactively *searching a (new) job* (Kanfer, Wanberg, & Kantrowitz, 2001; Kinicki & Latack, 1990; Latack, 1986; Latack & Dozier, 1986; Saks & Ashforth, 1999).

Feedback seeking can be aimed at initiating change in the self when individuals' engage in feedback seeking because they see it as instrumental to improving their performance (Ashford, 1986; Ashford, Blatt, & Vandewalle, 2003; Ashford & Cummings, 1983; Ashford & Tsui, 1991). *Proactive career behaviours* (Claes & Ruiz-Quintanilla, 1998; Seibert, Kraimer, & Crant, 2001; Tharenou & Terry, 1998) such as proactive skill development and career self-management (Z. King, 2004; Kossek, Roberts, Fisher, & DeMarr, 1998) are also aimed at achieving a better fit between the self and the environment.

Individuals also change their jobs to better fit their abilities and values. They *change* (Wrzesniewski & Dutton, 2001) and *expand their roles* (Nicholson, 1984; Parker et al., 1997), and *negotiate changes* in their role (Ashford & Black, 1996). Employees are not only concerned with completing assigned tasks, but *revise* (Staw & Boettger, 1990) and *redefine* (Hacker, 1998, 2003) them. *Proactive career behaviours* (Claes & Ruiz-Quintanilla, 1998; Seibert et al., 2001) can not only be aimed at initiating change in oneself, but also at finding or generating an environment more suitable for one's abilities or values.

Table 1.2.***Proactive behaviours mainly targeting the self or the role and exemplary publications***

Feedback monitoring	Ashford, 1986 Ashford, Blatt, & VandeWalle, 2003 Ashford & Cummings, 1983, 1985 Ashford & Tsui, 1991
Feedback seeking, information seeking	Ashford, 1986 Ashford et al., 2003 Ashford & Cummings, 1983, 1985 Ashford & Tsui, 1991 Ashford & Black, 1996 Miller & Jablin, 1991 Morrison, 1993a, 1993b
Indirect inquiry	Miller & Jablin, 1991
Proactive career behaviours	Claes & Ruiz-Quintanilla, 1998
Networking	Penley & Gould, 1981
Consultation	Bachman, O'Maley, & Johnston, 1978
Skill-development	Penley & Gould, 1981
Planning	Bachman et al., 1978
Career initiative	Seibert, Kraimer, & Crant, 2001 Tharenou & Terry, 1998
Career self-management	Kossek, Roberts, Fisher, & DeMarr, 1998 King, 2004
Proactive job search	Fineman, 1983 Kanfer, Wanberg, & Kantrowitz, 2001 Kinicki & Latack, 1990 Latack, 1986 Latack & Dozier, 1986 Saks & Ashforth, 1999
Role making	Graen, 1976
Relationship building	Ashford & Black, 1996 Morrison, 2002
Behavioural self-management	Saks & Ashforth, 1996
Positive framing cognitive self-management	Ashford & Black, 1996
Job crafting	Wrzesniewski & Dutton, 2001
Expanding roles	Nicholson, 1984 Parker, Wall, & Jackson, 1997
Job change negotiation	Ashford & Black, 1996
Task revision	Staw & Boettger, 1990
Task redefinition	Hacker, 1998, 2003 Hackman, 1976
Pro-social rule breaking	Morrison, 2006
Proactive service performance	Rank, Carsten, Unger, & Spector, 2007

1.2.3 Proactive behaviour and current work motivation theories

As mentioned above, research on proactivity has emerged phenomenon-driven (Grant & Ashford, 2008), and there is little literature explicitly linking various antecedents of proactivity to motivation theory (see e.g., Parker et al., 2006, for an exemption).

Current work motivation theories treat individuals in organizations primarily as selecting between different available options; as making a conscious decision on how much effort to invest in a (given) task. Expectancy theory (Vroom, 1964) suggests that “a process akin to rational gambling determines choices among courses of action” (Steel & König, 2006, p. 893). Individuals choose among options by “employing the evaluative criteria of desirability and feasibility” (Gollwitzer, 1996, p. 289). Equity theory (Adams, 1965) and social exchange theory (P. M. Blau, 1964; Homans, 1958)³ focus on the effort employees expend in response to their perceptions of the fairness of outcomes and treatment from the management and organization. Goal setting theory prescribes the type of goals to be set to maximize employees’ effort (Locke & Latham, 1990, 2002). The relatively recent temporal motivation theory which integrates expectancy theory, hyperbolic discounting (Ainslie, 1992; Ainslie & Haslam, 1992), cumulative prospect theory (Tversky & Kahneman, 1992), and need theory (Murray, 1938) explains individuals’ choices among available options as a function of expectancy and value, weakened by delay, with differences for rewards or losses (Steel & König, 2006).

Work motivation theories stress the importance of clear and specific goals and of reward-expectancies for individual motivation and emphasize observable, measurable and relatively discrete behaviours (Shamir, 1991). They may however be less useful in situations where goals are not clear, rewards are not readily available, and rewards-performance relationships are weak (Shamir, 1991). Cognitive work motivation theories such as goal setting

³ Not all behaviour based on social exchange is the result of conscious decisions. As Emerson (1976) put it, “rationality in the sense of action based upon prior calculation of expected returns forms one part of a larger subject matter of social exchange” (p.341).

theory and temporal motivation theory make an invaluable contribution to our understanding of employees' effort in achieving clearly defined performance goals. However, work motivation theories traditionally "conceptualized employees as relatively passive, reactive respondents to organizational contexts" (Grant & Ashford, 2008, p. 8). Particularly in "weak" situations (Mischel, 1973) where goals are not clearly specified, the means for achieving them are not established, and external rewards are not clearly linked to performance, work behaviour can be viewed as self-expressive, self-maintaining, and self-guided (Shamir, 1991). Compared to the great deal of research investigating how individuals pursue set goals, much less research has investigated the goals that individuals pursue more generally (Csikszentmihalyi & Nakamura, 1999; Oettingen, Pak, & Schnetter, 2001) (see Bateman, O'Neill, & Kenworthy-U'Ren, 2002; Roberson, 1989; 1990, for exemptions).

Drawing on self-concept- and identity theory, in this thesis I will propose the value of the concept of future selves for our understanding of the setting and pursuit of proactive goals.

Below, I first review process models of proactive behaviour in the literature and explore the role of goals in existing theories on proactivity. I then introduce a recent model of the setting and pursuit of proactive goals (Parker et al., forthcoming) as an overarching framework the motivation of proactive behaviour. Based on this broad framework I then narrow the focus of this thesis and elaborate how future selves function as a "reason to" behave proactively.

1.2.4 Process models of proactive behaviour

While the majority of the literature on proactivity focuses on explaining variance in the occurrence of proactive behaviour, there is limited research adapting a process view and discuss different phases of the "proactive behavior process" (Grant & Ashford, 2008, p. 16).

Frese & Fay (2001) draw on action theory (Hacker, 1998) and describe a *sequential model of personal initiative*, a type of proactive behaviour (Parker et al., 2006). In an action sequence, individuals first develop goals, then collect information and make prognoses about the future; they develop plans and

execute them before they finally monitor the execution of their plan and gather feedback on whether their actions have been successful or need to be adjusted.

Developing goals. When individuals take on a task, they interpret and “redefine” the assigned task (Hacker, 1998, p.51). This process of redefinition allows employees to extend their roles and integrate extra-role goals that are not expected, prescribed or assigned (Frese & Fay, 2001). Goals that lead to personal initiative are more concerned with future problems and a long-term approach to work. Personal initiative also requires employees to protect their goals and feel responsible for their attainment (Frese & Fay, 2001).

Collecting information and making prognoses. Employees engaging in personal initiative then actively scan and freely explore the environment. They anticipate potential problems and opportunities before they occur and develop knowledge on alternative routes of action. They maintain their search of the environment even if they face complexity and experience negative emotions.

Plan and execution. Personal initiative requires having an “active” plan that goes beyond the obvious, normal plan of action. Employees showing personal initiative have backup plans in case something goes wrong. They overcome barriers and quickly return to their plans when they have been disturbed.

Monitoring and feedback. At the last stage of the action sequence of personal initiative employees actively seek and generate feedback, and persist in seeking feedback even when faced with difficulties. They develop ways to identify future problems and barriers.

Grant & Ashford (2008) distinguish between three phases of the *proactive behaviour process*.

Anticipation. In the anticipation phase, individuals envision possible future outcomes. They imagine possible futures and the potential costs of pursuing these various possible futures. This imagination of future states increases the likelihood of behaviour to promote or prevent these future states.

Planning. Employees then generate plans of how to implement their ideas. They transform the anticipated future into an implementation guide that

specifies how it will be promoted or achieved (Gollwitzer, 1999). This can involve the development of alternative strategies and backup plans.

Action. Finally, individuals engage in “action directed toward future impact” (Grant & Ashford, 2008, p. 18).

1.2.5 Setting and pursuit of proactive goals – A framework of antecedents of proactivity

In both of the above process models of proactive behaviour, goals play a key role. Proactive behaviour is generally seen as intentional and goal-directed (Frese et al., 1997; Frese, Kring, Soose, & Zempel, 1996; Grant & Ashford, 2008); more specifically it can be considered as guided by individuals' self-set goals (Frese & Fay, 2001; Frese et al., 1997; Frese et al., 1996). Research on proactive behaviour has given a prominent role to individuals' agency in the pursuit of self-set goals. However, the role the self and personal goals play in proactive behaviour is not well-developed theoretically. Crant suggested that goals might in fact mediate the relationship between individual differences and contextual factors and proactive behaviour. Context and personality factors might “yield particular goals that are best achieved through the exhibition of proactive behaviour (Crant, 2000, p. 454).

In particular the literature on feedback seeking, issue selling, and taking charge emphasizes that individuals weigh costs and benefits when making a decision over whether or not to engage in proactive behaviour (e.g., Ashford et al., 1998; Dutton et al., 1997; Morrison & Phelps, 1999; VandeWalle, 1997). Most research on the antecedents of proactive behaviour has, at least implicitly, taken an expectancy theory approach, or has drawn on social cognitive theory, mainly focusing on the role of self-efficacy. The majority of individual differences and contextual factors investigated in relation to proactivity can be seen as influencing the probability of an individual making a conscious decision to engage in proactive behaviour.

In my conceptual work with Sharon Parker and Uta Bindl (Parker et al., forthcoming), we propose a model of the setting and pursuit of proactive goals based on expectancy (“can do”) and valence (“reason to”) judgements. Below I discuss these “can do”- and “reason to” judgements as proximal antecedents of

proactivity. More distal antecedents are likely to affect proactivity via these judgements. Proactive personality, learning goal orientation, and leadership as three examples for distal antecedents of proactivity will be discussed.

1.2.5.1 Proximal antecedents – “Can do”- and “Reason to” judgements

So-called “can do” judgements reflect individuals’ expectancy beliefs. Expecting future success is an important factor in individuals’ decisions to engage in proactive behaviour. Applying Bandura’s (1977) distinction between efficacy- and outcome expectations, I below briefly discuss self-efficacy and control appraisals as antecedents of proactivity.

Self-efficacy. Engaging in proactive behaviour can often be risky, involving challenging the status quo and bringing about change. It is therefore important that individuals believe they can be successful in being proactive and dealing with the consequences of their proactive action. Consistent with this premise, there is strong evidence that employees’ self-efficacy affects their proactive behaviour (e.g., Ashford, 1986; M. A. Griffin et al., 2007; Morrison & Phelps, 1999; Parker, 1998, 2000; Parker et al., 2006; Raghuram, Wiesenfeld, & Garud, 2003; Renn & Fendor, 2001; Speier & Frese, 1997; K. Strauss, Griffin, & Rafferty, 2009).

Control appraisals/outcome expectancy. While efficacy beliefs focus on individuals’ confidence in successfully performing the behaviour in question, control appraisals refer to individuals’ beliefs that they can exert control over situations, and that they can have an impact on significant outcomes. Control appraisals have been proposed as a proximal antecedent of proactivity (Frese & Fay, 2001), and have been shown to lead to greater proactivity⁴ in a four-wave longitudinal study (Frese, Garst, & Fay, 2007)⁵.

⁴ More specifically, to greater personal initiative. Following Parker et al. (2006), I consider personal initiative as one proactive concept; as a behavioural outcome rather than a dispositional variable (c.f. Crant, 2000).

⁵ In contrast, in a study by Parker et al., (2006) control appraisals were positively associated with proactive work behaviours; they did however not contribute unique variance over and above self-efficacy.

As mentioned above, in particular research on issue selling, taking charge, and feedback seeking has taken an expectancy-based approach where an individual's decision whether or not to engage in proactive behaviour depends on their assessment of the involved costs and benefits, and the perceived probability of success. Outcome expectancies have, for example, been shown to influence female managers' willingness to sell gender-equity issues to the top management (e.g., Ashford et al., 1998; Dutton et al., 2002).

"Can do" judgements are proximal antecedents of proactivity that are likely to mediate the effect of more distal individual- and situational factors (Frese & Fay, 2001; Parker et al., forthcoming). For example, a strong sense of efficacy and control appraisal may mediate the relationship between educational background and proactive job search (see Kanfer et al., 2001, for a meta-analysis). Role-breadth self-efficacy has been shown to mediate the relationship between proactive personality and proactive work behaviour (Parker et al., 2006). Regarding situational variables, Parker and colleagues (2006) found the relationship between job autonomy and proactive work behaviour to be mediated by role-breadth self-efficacy. In a study investigating the influence of different levels of leadership on proactive behaviour we found that transformational leadership on the team level indirectly enhances employees' proactivity by enhancing their role-breadth self-efficacy (K. Strauss, Griffin, & Rafferty, 2009). This is consistent with Eden's (1992) finding that employees' increased confidence in their own ability to perform mediates the effects of leaders' expressions of high expectations on their followers' performance.

In summary, "Can do" judgements are important proximal antecedents of proactivity, and are likely to mediate the influence of both individual and situational distal antecedents on individuals' decision on whether to engage in proactive behaviour.

"Reason to" judgements reflect that individuals do not only have to feel capable of successfully pursuing a proactive goal, but also need to have a compelling reason for setting it. As argued above, proactive behaviour frequently occurs in "weak" situations (Mischel, 1973), in which goals are not clearly specified, their attainment is not clearly linked to rewards, and the

means for achieving them are uncertain or not established. Because proactive goals are self-set and not assigned, the question of 'why' may be of particular importance; and the question how these goals are generated becomes a key interest.

Based on conceptual work with Parker and Bindl (Parker et al., forthcoming), I below draw on Eccles' et al. (Eccles et al., 1983; Eccles, Adler, & Meece, 1984) expectancy-value model, which proposes the importance of "subjective task value". Subjective task value contains four elements: interest/enjoyment, utility, relative cost, and attainment value. Below I apply this model, with some adaptation, to identify individuals' 'reasons to' set and pursue proactive goals, and draw on self-determination theory (Deci & Ryan, 1985, 2000; Ryan & Deci, 2000) to explore the broad spectrum of different types of self-regulation that may underlie the generation of proactive goals (Parker et al., forthcoming). Self-generated goals vary in the degree to which they are autonomous and self-integrated. Below I map autonomous and controlled motivation (Deci & Ryan, 1985; Ryan & Deci, 2000) onto task values (Eccles et al., 1983; Eccles et al., 1984) to explore a range of reasons to engage in proactive behaviour.

Interest/enjoyment (intrinsic value). Individuals are more likely to be proactive if they find the tasks involved enjoyable or intrinsically motivating. Intrinsically motivated behaviors are engaged in "out of interest without the necessity of separable consequences", and "require satisfaction of the needs for autonomy and competence" to be maintained (Deci & Ryan, 2000, p. 233). As argued above, proactive behaviour is more likely to occur in ambiguous situations (Grant & Ashford, 2008; M. A. Griffin et al., 2007), where individuals' behaviour is less determined by clear performance-reward contingencies. These situations offer an opportunity for self-determination and intrinsic motivation. Self-determination theory (Deci & Ryan, 1985, 2000; Ryan & Deci, 2000) draws on the idea that humans are motivated to maintain an optimum level of stimulation (Hebb, 1955) and have basic needs for self-determination (deCharms, 1968), competence (White, 1955), and relatedness (Baumeister & Leary, 1995). Challenging activities are intrinsically motivating because they fulfill individuals' need for competence. Actively taking charge

of a situation, and being proactive, might be a way of increasing challenge and fulfilling one's basic needs for competence and self-determination. The basic need of experiencing competence and autonomy may thus serve as a reason to generate proactive goals. In addition to this ultimate goal of self-determination, proactive goal generation may also be motivated by the more immediate experience of enjoyment.

In summary, if the tasks involved in the pursuit of proactive goals are challenging and interesting, individuals are likely set proactive goals because the tasks involved provide the immediate reward of enjoyment, and because proactive goals award them with the opportunity for fulfilling needs for autonomy and competence (Parker et al., forthcoming).

Individuals differ in their trait-like intrinsic–extrinsic motivational orientation (see e.g., Amabile, Hill, Hennessy, & Tighe, 1994), in their preference for challenging tasks and their striving for competency and mastery (Dweck, 1986; Nicholls, 1984). The idea of individual differences in the preference for challenging tasks and thus for proactive behaviour is consistent with Frese & Fay's (2001) proposition of achievement motivation as a distal antecedent of proactivity.

Importance (attainment value). Attainment value according to Eccles et al., (1983) refers to the personal importance of doing well on the task, including the relevance of engaging in the task for confirming or disconfirming salient aspects of one's self⁶.

Above, I have described how intrinsic motivation can drive the setting of proactive goals. Self-determination theory also recognizes that individuals can be motivated to engage in behaviours even if they are not especially enjoyable. Specifically, Deci and Ryan (Deci & Ryan, 1985, 2000; Ryan & Deci, 2000) propose a continuum of autonomous to controlled motivation. At one end of this continuum is intrinsic motivation which is likely to prompt the generation of proactive goals because the tasks involved may satisfy the basic needs of competence and autonomy, or may be enjoyable (Parker et al.,

⁶ Similarly, Hollenbeck and Brief (1987) refer to the "attractiveness of goal attainment" (p. 215).

forthcoming). At the other end is external regulation, regulation that is initiated and maintained by consequences external to the person, i.e., by specific external contingencies. Behaviour that is externally regulated is unlikely to be sustained once these contingencies are withdrawn. This has implications for attempts to reward proactive behaviors. External regulation is unlikely to play a prominent role in the motivation of proactive behavior, since the ambiguous situations it occurs in are characterised by a lack of clear behaviour-reward contingencies (Parker et al., forthcoming). In addition, attempts to monitor and evaluate proactive behaviour may undermine its intrinsic motivation (Harackiewicz, Manderlink, & Sansone, 1984; Lepper & Greene, 1975). Organizations' attempts to increase employee proactivity, e.g., by evaluating and rewarding employees' suggestions, are likely to result in proactive behaviour that is mainly motivated by external rewards and that is unlikely to be sustained if these rewards are withdrawn.

In between these extremes lie introjected, identified, and integrated regulation, which are experienced as more autonomous than externally regulated, even though they are types of extrinsic motivation. They arise through a process of internalization, in which people take in attitudes, values, and regulatory structures (Ryan, Connell, & Deci, 1985).

Specifically, introjected regulation occurs when regulations are internalized but have not been assimilated by the self. As with external regulation, behaviour is not self-determined, but is contingent on its consequences. However, in the case of introjected regulation these contingent consequences are administered by individuals themselves. Within this category of regulation, self-motives are likely to play a key role. Self-motives are "focused at establishing or maintaining a particular state of self-awareness, self-representation, or self-evaluation" (Leary, 2007, p. 319). Past research on introjected regulation has particularly focused on individuals' attempts to demonstrate ability or avoid failure in order to maintain a positive self-evaluation (deCharms, 1968; Nicholls, 1984; Ryan, 1982). Self-motives have been widely acknowledged in the feedback seeking literature (see Ashford & Blatt, 2003, for a review; see also Anseel, Lievens, & Levy, 2007, for a discussion of self-motives and feedback-seeking motives). Self-assessment or

self-improvement motives can motivate individuals to gain useful information on their performance. Alternatively, they may wish to maintain or improve the favourability of their self-view (self-enhancement motive) and protect their ego and self-esteem from the effects of negative feedback about their performance, or they may wish to confirm existing self-views (self-verification).

To date, little research has investigated the role of self-motives in the motivation of other proactive behaviours. Yet the self-enhancement motive is likely to play a key role in self-initiated behaviours. Contingent self-worth, i.e., pride⁷, may serve as an incentive for a variety of proactive behaviours (Parker et al., forthcoming). In addition, self-improvement motives are likely to motivate proactive behaviours aimed at changing the self, such as proactive skill development.

So far, I have focused on the attainment value of proactive goals and discussed how the generation of proactive goals can be driven by controlled motivation in which behaviour is contingent on either external or internal contingencies. Drawing on my conceptual work with Parker and Bindl, I explore the link between proactive behaviour and higher order goals or values they are related to below, and focus on identification and integration as types of autonomous motivation that relate to the utility of a goal.

Usefulness (utility). In Eccles et al. (1983) theory of motivation, utility value derives from how well a task relates to current and future goals. We (Parker et al., forthcoming) extend this component of task value to include the extent to which proactive behaviours are related not only to current and future goals, but also to higher order standards such as identities and values. In contrast to the attainment value of a goal discussed above, usefulness is not evaluated on the basis of contingencies, but is based on its relation to enduring interests and deeper beliefs.

Values are very abstract goals which influence the development of more specific goals (Pervin, 1983; Rokeach, 1973). They exert their

⁷ Tracy and Robins (2004) suggest that self-enhancement processes may be driven by the desire to promote feelings of pride and avoid feelings of shame and argue that individuals tend to only experience pride when they become aware of having lived up to an actual or ideal self-representation.

motivational influence by causing the formation of more specific identities, from which self-congruent goals are derived (Cropanzano, James, & Citera, 1993). Goals congruent with one's values and beliefs are likely to remain enduringly relevant (Little, 1989), are pursued with more sustained effort (Sheldon & Elliot, 1999), and are better protected from competing desires and temptations (Kuhl, 1986).

Two types of autonomous motivation can underlie the setting of proactive goals that are congruent with individuals' values and beliefs (Parker et al., forthcoming).

Identified regulation is based on individuals' conscious valuing of a behavior and its intended consequences, i.e., seeing them as serving an important purpose and being congruent with one's personal goals and identity. Individuals will set proactive goals as a result of the internalization of external values and goals, not only because the achievement of these goals is interesting. Identified motivation involves acting out of a sense of personal conviction. Behaviour based on this type of motivation may not be enjoyable, but it fits with individuals' values and beliefs. Thus individuals proactively take charge of their work environments to bring about improved procedures not simply because this involves enjoyable, self-determined tasks, but because the action is consistent with what they value, and relates to their self concept (Parker et al., forthcoming). A nurse might identify a way to help speed up the discharge of a patient, not because this is necessarily an intrinsically motivation task, because she understands and accepts the importance of patient flow for the effective functioning and care delivery within the hospital.

Individuals' dispositions and motivational orientations, but also contextual factors can determine the extent to which they to internalise external values and adapt broader roles and identities. For example, individuals' identity orientations can be influenced by the organizational context (Brickson, 2000, 2007). Interpersonal cooperation and dense organizational networks can promote employees' identification with their role-relationships, their self-definition as team member, co-worker, subordinate, etc. Organizational characteristics like a climate for service (Albrecht & Zemke, 1985; Schneider, 1990a, 1990b; Schneider & Bowen, 1985; Schneider, Bowen, Ehrhart, &

Holcombe, 2000) or a climate for customer orientation (Rogg, Schmidt, Shull, & Schmitt, 2001) can also encourage employees to identify themselves in terms of their role-relationships.

Parker and Ohly (in press) suggested that the concept of flexible role orientation (Parker et al., 1997), which individuals' ownership and sense of responsibility for problems and goals beyond their immediate tasks, can be seen as indicative of the process of internalization in which individuals 'take on' external values and regulatory structures. Individuals with more flexible role orientations define their role more broadly, and thus experience a sense of accountability for broader goals (e.g., customer satisfaction) beyond completing their core tasks. They are more likely to engage in proactive behaviour (Parker et al., 2006).

Similarly, concepts of felt responsibility for constructive change in the organization (Fuller, Marler, & Hester, 2006; Morrison & Phelps, 1999) or for the organizations' future (K. Strauss, Griffin, & Parker, 2009) aim to account for employees' propensity to internalize values and identities that facilitate the generation of self-generated proactive goals.

Finally, integrated regulation is experienced as even more autonomous than the types of self-regulation described above. While behaviours based on identified motivation are regulated by (formally external) values that are internalized, integrated regulation is based on "personally endorsed values, goals, and needs that are already part of the self" (Deci & Ryan, 2002, p. 18).

Proactive goals are not only linked to current identities, but can also be motivated by future-oriented identities. In this thesis I identify the concept of the 'future work self', an imagined, hoped for, future identity that captures an individual's hopes and aspirations in relation to their work as an identity that drives the setting and pursuit of proactive goals as I will elaborate below.

Costs. Eccles and colleagues (1983) have argued that the negative aspects of engaging in the task, such as fear of either failure or success, the amount of effort needed, and the opportunities lost by focusing on this action rather than another all need to be taken into account. As mentioned above, in particular the literature on feedback seeking, issue selling, and taking charge emphasizes that individuals weigh costs and benefits when making a decision

over whether or not to engage in proactive behaviour (e.g., Ashford et al., 1998; Dutton et al., 1997; Morrison & Phelps, 1999; VandeWalle, 1997). Similarly, Aspinwall (2005; Aspinwall & Taylor, 1997) suggested that individuals will not engage in proactive coping if they perceive the involved effort as too costly in terms of time, money, energy, or other resources relative to the gain they may provide. Research has identified contextual and dispositional variables that will influence individuals' perceptions of the potential costs involved in proactivity. For example, employees are more likely to engage in issue selling when they perceive the context as favourable (Ashford et al., 1998; Dutton et al., 2002). A lack of management support (Morrison & Phelps, 1999) and psychological safety (Edmondson, 2003) can render the costs involved in proactive behaviour too high and cause employees to refrain from making suggestions and speaking up.

A further aspect of the potential costs of proactive goals is their emphasis on future impact which makes them susceptible to temporal discounting (Ainslie, 1992; Ainslie & Haslam, 1992; Loewenstein & Prelec, 1992). The effects of a goal's valence are weakened by the delay of its attainment (Steel & König, 2006). Individuals constantly undervalue the future in favour of the present (Akerlof, 1991). When they choose from a variety of possible attractive and achievable goals, they undervalue future events. Individuals' future orientation, their dispositional tendency to value the future over more immediate outcomes (Strathman, Gleicher, Boninger, & Edwards, 1994) can influence their judgment on the cost of proactive goals and has been linked to higher proactive behaviour (Parker & Collins, 2009; K. Strauss, Griffin, & Parker, under review), and is a further example of an individual difference that influences "reason to" judgements affecting the setting and pursuit of proactive goals.

Similar to judgements of expectancy, "reason to" judgements are likely to mediate the influence of individual differences and situational variables on the setting and pursuit of proactive goals (Parker et al., forthcoming).

Drawing on Parker, Bindl and Strauss' (forthcoming) expectancy-valence based model of the motivation of proactive behaviour I have argued that trait-like differences in intrinsic motivation and the need for competency

and autonomy can influence the task value of proactive goals. I have proposed that external regulation may undermine feelings of self-determination and autonomy that motivate proactive behaviour which has implications for organizations' attempts to increase and reward proactivity. The attainment value of proactive goals may also depend on self-administered contingencies. Anticipated feelings of pride and shame and motives of self-enhancement can motivate the generation of proactive goals.

I have also briefly described the link between proactive behaviour and the internalization of external values and goals, and outlined some examples for dispositional and contextual factors that can determine the extent to which individuals internalize external values and adapt broader roles and identities. Drawing on models of goal hierarchies (e.g., Cropanzano et al., 1993), I have proposed that higher order standards and values can be translated into proactive goals, and that future-oriented identities can encourage the generation of proactive goals which is the main focus of this thesis. Finally, I have focused on the potential costs involved in proactivity, and have outlined an example of an individual difference that influences the degree to which the long-term goals involved in proactivity are valued over more short-term outcomes.

A summary of the basic assumptions of the model is shown in Figure 1. "Can do" judgments have been a prominent focus in the literature, and there is substantive empirical support for the role of efficacy beliefs in the motivation of proactive behaviour. "Reason to" judgments have received less attention. In my research, I focus on "reason to" judgements, in particular on the usefulness or utility of proactive goals. I explore how their relation to future-oriented identities, so called future selves, drives the setting and pursuit of proactive goals. Before focusing more narrowly on this "reason to" behave proactively which is the main focus of this thesis, I first elaborate on the mechanisms that underlie the motivation of proactive behaviour in more detail. Below, I focus on examples of distal antecedents of proactivity which are likely to exert their influence via "can do"- and "reason to" judgements.

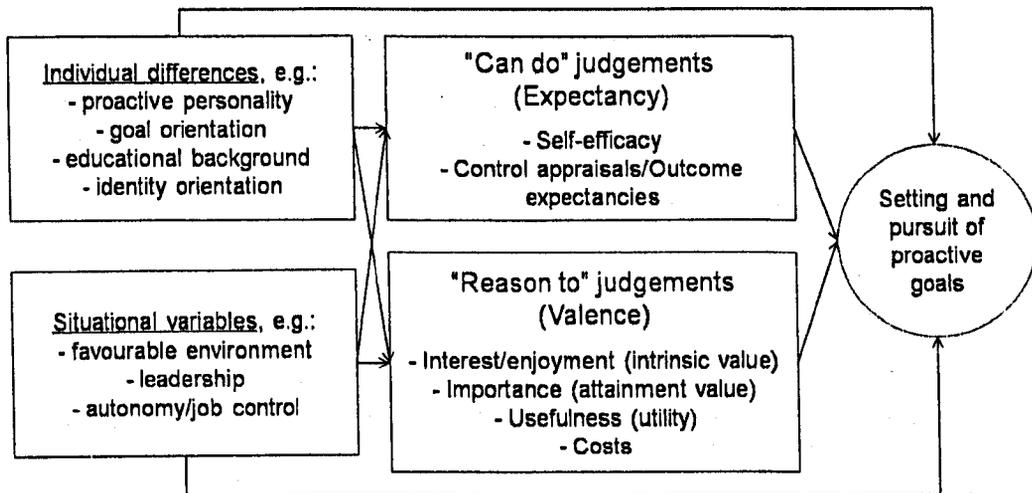


Figure 1. Expectancy-valence based model after Parker et al. (forthcoming)

1.2.5.2 Distal antecedents – Proactive personality, learning goal orientation and leadership as examples

As argued above, individual and situational distal antecedents may influence the setting and pursuit of proactive goals by influencing expectancy- and valence judgements. This view is consistent with Frese and Fay's (2001) distinction between distal antecedents such as personality variables, knowledge, skills, and abilities, and environmental support; and proximal antecedents which centre around concepts of control and mastery. The model reviewed above however includes valence judgements as proximal antecedents.

Below, I focus on three exemplary antecedents that have been found related to a number of proactive behaviours and briefly discuss how their influence on proactive behaviour may be mediated by "can do" and "reason to" judgements.

Proactive personality. One of the most prominent individual predictors investigated in the literature is proactive personality, the general dispositional tendency to initiate change in one's environment (Bateman & Crant, 1993). Bateman and Crant (1993) compare proactive personality to Weisz' (1990) concept of primary control, which refers to attempts to change objective conditions rather than adapting to them (secondary control). Research has established relationships between proactive personality and a number of proactive behaviours which include network building and initiative (J. A. Thompson, 2005), proactive career behaviours (Seibert et al., 2001), proactive

service performance (Rank et al., 2007), and innovation (e.g., coming up with new ideas; Seibert et al., 2001).

Proactive personality also has established relationships with individual job performance (via network building and initiative; Crant, 1995; J. A. Thompson, 2005), perceptions of leadership (Bateman & Crant, 1993; Crant & Bateman, 2000), and career outcomes (Seibert, Crant, & Kraimer, 1999). It facilitates organizational entry (Kammeyer-Mueller & Wanberg, 2003), and leads to positive work perceptions and work outcomes, at least for individuals who engage in effective responses to situations (Chan, 2006).

In addition to its direct relationship with proactive behaviour, “can do”- and “reason to” judgements may be important mechanisms through which proactive personality may influence the setting and pursuit of proactive goals. This idea is consistent with empirical findings that the relationship between proactive personality and –behaviour is mediated by efficacy beliefs. Brown and colleagues (Brown, Cober, Kane, Levy, & Shalhopp, 2006) found that proactive personality influences proactive job search via job-search self-efficacy. Parker et al. (2006) found the relationship between proactive personality and proactive work behaviours to be mediated by role-breadth self-efficacy, individuals’ confidence in taking on challenging tasks and new roles (Parker, 2000).

In the same study, Parker and colleagues also provide empirical evidence for the role of flexible role-orientation as a “reason to” mechanism in the relationship between proactive personality and proactive work behaviours. Individuals with a flexible role-orientation define their roles broadly and feel responsible for longer term goals (Parker, 2000). In the context of the model presented above, a flexible role-orientation may reflect individuals’ identified regulation. As described above, identified regulation is based on individuals’ conscious valuing of a behavior and its intended consequences, and involves acting out of a sense of personal conviction.

In sum, while proactive personality may influence proactive behaviour directly, judgements of expectancy and valence are likely to be important mechanisms in this relationship.

Goal orientation. Goal orientation is an example of an individual antecedent of proactivity that can affect individuals' evaluation of the costs involved in the pursuit of proactive goals. For example, research that shows that performance goal orientation can potentially inhibit proactive action (Parker & Collins, 2009). A performance goal orientation is associated with the belief that performance is mainly the result of ability, which is considered stable (Dweck, 1986, 1999). For individuals with a high performance goal orientation, the costs of being proactive for one's sense of competence might well be too high. Individuals with a performance goal orientation perceive negative feedback as threatening to their ego and image (Tuckey, Brewer, & Williamson, 2002). Individuals who are high in learning goal orientation, i.e. who aim to develop competence by mastering new situations and acquiring new skills, may find feedback seeking more valuable and less risky and more frequently engage in this proactive behaviour (VandeWalle & Cummings, 1997)

Parker and Collins (2009) found learning goal orientation to not only be associated with feedback seeking, but also with taking charge, individual innovation, and problem prevention. These findings suggest that goal orientations may in fact play an important role in individuals' assessment of the costs involved in proactivity more generally. A learning goal orientation reflects individuals' conviction that their performance, their ability, and ultimately their self, is malleable. In the light of this belief, setbacks and negative reactions of one's environment are less detrimental to one's ego.

Leadership. Bass (1990) suggested that one reason transformational leadership⁸ can increase performance (see Judge & Piccolo, 2004, for a recent review) is because of its impact on proactive work role behaviours. Indeed, Rank and colleagues (Rank, Nelson, Allen, & Xu, in press) found transformational leadership positively related to followers' innovative behaviours. Belschak and Den Hartog (in press) report positive relationships

⁸ Transformational leadership motivates followers to go beyond expectations by transforming their attitudes, beliefs and values rather than by gaining compliance

between transformational leadership and pro-social as well as pro-organizational proactive behaviour.

Leaders are likely to play a role in shaping proactive behaviour by influencing judgements of valence and expectancy. In a study of 196 employees in an Australian public sector agency transformational leadership of team leaders was related to follower's role-breadth self-efficacy which was in turn associated with team member proactivity, i.e., proactive behaviour aimed at changing the way the team works (K. Strauss, Griffin, & Rafferty, 2009). This is consistent with previous research showing that leaders can affect followers' efficacy beliefs and that these beliefs mediate the influence of leadership on performance (see van Knippenberg, van Knippenberg, De Cremer, & Hogg, 2004, for a review). Thus, leaders are likely to influence proactive behaviour enhancing followers' expectancy judgements.

They may also influence individuals' valence judgements in relation to proactive goals. In the same study, senior leaders' transformational leadership had a positive relationship with affective organizational commitment which was related to organization member proactivity, i.e., proactive behaviour aimed at initiating change at the organizational level (K. Strauss, Griffin, & Rafferty, 2009). Organizational commitment and –identification (see e.g., Meyer, Becker, & Van Dick, 2006, and; van Knippenberg & Sleebos, 2006, for a discussion of conceptual differences and communalities) are likely to be important “reasons to” behave proactively, facilitating identified regulation and influencing individuals' level of self-definition (Lord, Brown, & Freiberg, 1999); transformational leadership is a key determinant of organizational commitment (e.g., Avolio, Zhu, Koh, & Bhatia, 2004) and identification (e.g., Kark, Shamir, & Chen, 2003). In sum, there is empirical evidence for the influence of transformational leadership on both “can do” and “reason to” judgements.

Supportive leadership on the other hand is likely to influence proactive behaviour via different mechanisms. Previous research connecting followers' role-breadth self-efficacy to leadership behaviours found no relationship with supportive leadership (Parker et al., 2006; Rafferty & Griffin, 2006). It is however likely to influence followers' assessment of the costs associated with

engaging in proactive behaviours. Through promoting a climate of trust and psychological safety, supportive leadership may make it seem less risky for employees to set and pursue proactive goals (Bindl & Parker, in press).

Summary. Above, I have briefly reviewed the literature on three prominent distal antecedents of proactive behaviours and have demonstrated how their influence on the setting and pursuit of proactive goals may be mediated by expectancy- and valence-judgements. Both individual- and situational antecedents are likely to at least partially exert their influence on proactive behaviour by affecting individuals' expectancy beliefs and their "reasons to" behave proactively. This idea is broadly supported by empirical evidence as reviewed above.

Below, I give a brief overview over the outcomes of proactive behaviour, before proposing the value of the concept of future selves for our understanding of the setting and pursuit of proactive goals.

1.2.6 Outcomes of proactive behaviour

In his 2000 review, Crant concludes that proactivity has been shown to lead to a number of important outcomes in organizations, such as better employee performance, entrepreneurial behaviour, and innovation (Crant, 2000).

The initiation of positive change in organizations is an important mechanism through which proactive behaviour influences organizational performance. While there has been little empirical research on this relationship, the beneficial effect of proactive behaviour on organizational performance has been consistently suggested or implied. For example, Griffin, Neal, and Parker (2007) propose that individual proactivity, team member proactivity, and organization member proactivity are "individual behaviours that lead to effectiveness in organizations" (p. 343), especially in uncertain organizational environments where the most effective work behaviours cannot be prescribed in advance. Personal initiative is also expected to lead to high performance on the individual and organizational level (Frese & Fay, 2001). A number of proactive behaviours by definition make a positive contribution to organizational performance. For example, voice is defined as making

suggestions intended to be constructive, and is also expected to make a positive contribution to the group or organization (LePine & Van Dyne, 2001), as is taking charge (Morrison & Phelps, 1999).

Proactive behaviour has been suggested to play a crucial role in the process of innovation, e.g. by influencing the transition from idea generation to idea implementation (Rank et al., 2004). There is growing evidence that championing of ideas is a crucial determinant of the success of innovation, for example, championing behaviours make a positive contribution to project performance in product innovation projects (Howell & Shea, 2001). Similarly, entrepreneurs' proactivity has been shown to be positively related to firm success (Koop, De Reu, & Frese, 2000; Zempel, 1999).⁹

On the individual level, proactive behaviour has been linked to higher performance ratings by supervisors (Grant, Parker, & Collins, 2009; J. A. Thompson, 2005; Van Dyne & LePine, 1998) and higher sales performance (Crant, 1995).

Proactive behaviours targeting the self and the role have been shown (or suggested) to facilitate organizational socialization and individuals' adaptation to new organizational environments. Feedback seeking is expected to improve individual performance and to lead to a better adaptation to new organization environments (Ashford, 1986). Actively seeking feedback can lead to more accurate performance feedback (Ashford et al., 2003; Ashford & Tsui, 1991) and can be useful for achieving instrumental goals through goal setting (Renn & Fendor, 2001). It has been suggested to reduce role ambiguity and role conflict during organizational entry (V. D. Miller & Jablin, 1991). Organizational newcomers' proactive seeking of information leads to higher performance and satisfaction (Morrison, 1993b), and to higher role clarity, task mastery and social integration (Morrison, 1993a). Relationship building in new organizational environments is associated with higher consecutive job performance and satisfaction (Ashford & Black, 1996).

⁹ In this thesis I focus only on proactivity enacted on the individual level. Research on team- (e.g., Hyatt & Ruddy, 1997; Kirkman & Rosen, 1999) or organization-level proactivity (Aragon-Correa, 1998; Aragon-Correa, Hurtado-Torres, Sharma, & Garcia-Morales, 2008) is not reviewed here.

Proactive career behaviours have been shown to lead to a higher career satisfaction and a faster career progression (in terms of salary growth and promotions) (Seibert et al., 2001), and proactive (i.e., active and anticipatory) job search has a positive impact on individuals' employment status (Saks & Ashforth, 1999).

Past research into different types of proactive behaviours has mainly focused on their benefits while largely overlooking their costs (Grant & Ashford, 2008). In addition, dysfunctional and antisocial behaviour in organizations can also be proactive (R. W. Griffin & Lopez, 2005). In this thesis, I focus only on proactive behaviours that are not intended to be destructive.

Compared to the extensive body of research investigating antecedents of proactive behaviours fewer studies have empirically investigated the outcomes of proactive behaviour. However, there is broad agreement on its beneficial effect on individual and organizational performance (e.g., D. J. Campbell, 2000; Crant, 2000; Frese & Fay, 2001; Parker, 2000; Parker et al., 2006), particularly in uncertain environments (M. A. Griffin et al., 2007).

1.3 Summary

Thus far, I have provided a definition of proactive behaviour in organizations, and have distinguished between proactive behaviours targeting the environment, and the role or the self. I have provided a perspective on the challenges proactive behaviour poses for current work motivation theories. I have then reviewed process models of proactive behaviour in the literature and explored the role of goals in existing theories of proactivity. Finally I have introduced a recent model of the setting and pursuit of proactive goals (Parker et al., forthcoming) as an overarching framework the motivation of proactive behaviour, before providing a brief review of the outcomes of proactive behaviour.

In the next chapter I introduce the self-concept, in particular the concept of the future self, as a motivator of proactive behaviour. More specifically, I develop the concept of the future work self, and explore its role in the setting and pursuit of proactive goals.

2 Chapter 2 – The origin of proactive goals: Introducing future selves

As argued above, compared to research investigating the pursuit of externally set goals, relatively little research has investigated how individuals pursue goals more generally (Csikszentmihalyi & Nakamura, 1999; Oettingen et al., 2001), and how self-set goals are generated. The literature on proactivity has acknowledged the role of self-set goals in the regulation of proactive behaviour and has focused on expectancy- and valence-based judgements that determine whether individuals set and pursue proactive goals. While several process models of proactive behaviour acknowledge the role of anticipation and mental simulation in the setting of proactive goals (Bindl & Parker, 2009; Grant & Ashford, 2008), little attention is given to how mental simulations that lead to the setting of proactive goals are created, and how these fantasies are turned into proactive goals.

In this thesis I focus on the under-investigated role of the anticipation phase in the proactive behaviour process (Grant & Ashford, 2008). I set out to answer the question how proactive goals are generated and pursued. Drawing on self-concept- and identity research, I propose that the future-oriented self-concept provides a driving force for proactive goals. In particular the “future work self” is introduced as an image of what the future self at work could be like; an image that gives meaning to current behaviour and motivates goals for future behaviour. I argue that the future work self can be a powerful motivational resource that leads individuals to set proactive goals in organizations and to persist in their pursuit even when faced with obstacles, rather than settling for a solution which can in the short term be more comfortable (Frese et al., 1997; Frese et al., 1996). Below, I review the literature on future selves before developing the more specific concept of the future work self and introducing a model of future work selves and proactive goals.

2.1 Future selves and the future work self

Future selves (also termed possible selves) are specific cognitive representations of what individuals hope, expect, or fear to be in the future (Markus & Nurius, 1986). As part of the self-concept, future selves constitute “motivational resources that individuals can use in the control and direction of their own actions” (Oyserman & Markus, 1990, p. 122). Individuals’ self-concept is an important mediator in many intrapersonal and interpersonal processes. The self-concept influences self-regulatory processes such as goal setting and self-evaluation, motivation processes and affect regulation (Markus & Wurf, 1987). The self-concept is a dynamic collection of self-representations and identities that capture what individuals think they are, but also what they think they should be, or what they want to be in the future (Markus & Wurf, 1987)

Future selves provide a basis for understanding the content of goals that individuals choose to pursue. Future selves provide an essential link between the self-concept and motivation (Markus & Nurius, 1986). They function as incentives for future behaviour (Markus & Nurius, 1986), as reference points in self-regulatory systems (Carver & Scheier, 1981, 1990b, 1998). Goal setting theory proposes that discrepancies between the current state and a desired future self initiate behaviour (Locke, 1991). These discrepancies are used to regulate behaviour. Self-discrepancy theory (Higgins, 1987, 1989) and control theory (Carver & Scheier, 1981, 1990b, 1998) posit that individuals continuously compare their actual self to their ideal self and strive to reduce discrepancies between the current state of their self and its desired state. Similarly, social cognitive theory proposes a dual system of the creation and reduction of discrepancies that underlies intentional behaviour (Bandura, 1989, 2001). Individuals strive to reduce the discrepancy between their current state and a desired reference point (e.g., a hoped for future self), and to increase the discrepancy between their current state and an undesired reference point (e.g., a feared future self). The striving for the attainment of a desired future self is the basis of individuals’ development. Future selves are informed by individuals’ dispositions, their socialization and cultural context, and by their values. From future selves (and other forms of self-identities) lower level goals such as

personal projects (Little, 1983, 1989) or life tasks (Cantor & Kihlstrom, 1989; Cantor et al., 1991) are derived (Cropanzano et al., 1993). Finally, at the bottom of this hierarchy of goals are specific task goals that derive their meaning from their relation with higher order goals (Cropanzano et al., 1993; Volpert, 1983).

In summary, future selves can be seen as abstract higher level goals that drive motivation (Markus & Ruvolo, 1989). These imagined future selves can take the form of scenarios, a type of visual experience that can be highly affect-laden. An example of a such a future self is shown below.

"I always think about this image when I think about my future. I am reaching retirement age (with grey hair), and I am dressed very professionally in a lecture theatre. It is nearing the end of a lecture I have given, and many people have their hands up, waiting to ask me some questions. We have run over time, but no one has left - they are still very interested in my research. I am up on stage/at front, and feel very relaxed but also excited about what I have been working on, overall I am feeling very happy with what I have achieved in my career in academia. I receive [...] applause on my exit, and feel proud that I have managed to inspire people, and that they have learned something from me."

Postgraduate research student

Below I review past research on the concept of future selves (or possible selves), and explore their function and characteristics before defining the more specific concept of the future work self that will form the main focus of this thesis.

2.1.1 Research on future selves

According to ISI Web of Science the seminal piece of Hazel Markus and Paula Nurius (1986) on possible selves was cited 1,010 times since its publication (November 2008). The concept has been fruitfully applied in a range of research areas including

- career development (Fletcher, 2000; Kerpelman, Shoeffner, & Ross-Griffin, 2002; Krieshok, Hastings, Ebberwein, Wettersten, & Owen, 1999; Lips, 2000; Meara, Day, Chalk, & Phelps, 1995; Packard &

Nguyen, 2003; Pizzolato, 2007; Plimner & Schmidt, 2007; Plimner, Smith, Duggan, & Englert, 1999-2000),

- health psychology (Aloise-Young, Hennigan, & Leong, 2001; M. E. A. Black, Stein, & Loveland-Cherry, 2001; Freeman, Hennessy, & Marzullo, 2001; Hooker, 1992; Hoyle & Sherrill, 2006),
- organizational behaviour (Ibarra, 1999; Lord et al., 1999; Sosik, 2000)
- educational psychology (Anderman, Anderman, & Griesinger, 1999; Lee & Oyserman, 2007; Leonardi, Syngollitou, & Kiosseoglou, 1998; Leondari, 2007; Oyserman, Bybee, & Terry, 2006; Oyserman, Gant, & Ager, 1995; Oyserman, Terry, & Bybee, 2002; Penland, Masten, Zelhart, Fournet, & Callahan, 2000; Rossiter, 2007a, 2007b; Ruvolo & Markus, 1992),
- gender research (Anthis, Dunkel, & Anderson, 2004; Kimmelmeier & Oyserman, 2001; Knox, Funk, Elliott, & Bush, 1998; Lips, 2000, 2007; Oyserman & Fryberg, 2006; Packard & Nguyen, 2003; Segal, DeMeis, Wood, & Smith, 2001; Stake & Nickens, 2005), and
- life span psychology (Cross & Markus, 1991; Dunkel, 2000; Dunkel & Anthis, 2001; Frazier, Hooker, Johnson, & Kaus, 2000; Hooker, Fiese, Jenkins, Morfei, & Schwagler, 1996; Kerpelman & Pittman, 2001; L. A. King & Raspin, 2004; L. A. King & Smith, 2004; Oyserman & Fryberg, 2006; Oyserman & Markus, 1990; Oyserman & Saltz, 1993; Stein, Roeser, & Markus, 1998; Waid & Frazier, 2003; Yowell, 2000).

Recent review articles (e.g., Packard & Conway, 2006), book releases (Dunkel & Kerpelman, 2006), and special issues (e.g., Rossiter, 2007) demonstrate the prominent role of the concept particularly in educational psychology and life-span research. However, with the exemption of some work in the field of leadership (Lord et al., 1999; Sosik, 2000), and professional identity (Ibarra, 1999, 2007), the concept has not been widely applied to organizational behaviour.

In my work, I aim to integrate the concept of future selves developed primarily in social and educational psychology into the organizational behaviour and management literature. Future selves link identity to goals, and,

as I will argue below, provide a useful framework for our understanding of individuals' proactivity.

2.1.2 Content of future selves

Future selves partially derive from presentations of the self in the past (Markus & Nurius, 1986)¹⁰. Visions of one's future self are based on social categorizations and roles, and views of one's skills and talents. Thus, past performance and self-evaluation play an important role in the construction of future selves (Meara et al., 1995). In addition, individuals imagine what is possible for themselves by drawing comparisons with significant others and by internalizing norms and stereotypes relating to their social identities (Cross & Markus, 1991; Kao, 2000; Knox et al., 1998). Future selves mediate the effect of socio-cultural values on behaviour by determining the desirability of alternative paths for the future (Oyserman & Fryberg, 2006; see also Cropanzano et al., 1993).

Previous research has focused on detecting communalities in what individuals hope and fear for their future and has aimed to categorize the content of future selves.

Cross and Markus (1991) investigated future selves in a sample of 173 adults and coded future selves into 9 content categories: personal (e.g., "to be happy"), physical (e.g., "exercising more regularly"), abilities/education (e.g., "learning other languages"), life-style (e.g., "living somewhere with milder winters"), family (e.g., "being a mother of 2-3 children"), relationships (e.g., "being alone" (feared possible self)), occupation (e.g., "to be a teacher in a university"), material (e.g., "to have enough money"), and leisure (e.g., "to be a good guitar player"). The relative importance of these categories differed

¹⁰Markus and Nurius (1986) propose that past selves, to the degree to which they may define the individual again in the future, can also be possible selves. These selves are expected to remain part of the self-concept and can be activated by the situational context (e.g., the socially anxious possible self that is linked to childhood memories of being afraid of people can be activated during a visit home during the holidays) (page 955).

between the age groups investigated, which suggests that future selves change over the life span¹¹.

Oyserman and Markus (1990) coded hoped for future selves into six categories: intrapersonal selves (e.g., “happy”, “attractive”), interpersonal selves (e.g., “have friends”, “be trusted”), jobs (e.g., “make money”, “have a job”), school or school-related extracurricular activities (e.g., “do well in school”, “play basketball in school”), material goods (e.g., “have a car”, “have money”), and any negative selves.

2.1.3 Function of future selves

Ibarra (1999) explored how possible selves (termed “provisional selves”, p. 764) are used to develop a sense of a coherent professional identity. More generally, possible selves are proposed to facilitate the adaptation to new roles across the lifespan (Cross & Markus, 1991) – a conceptualisation of “me” in the new role. Similarly, Dunkel’s research (Dunkel, 2000; Dunkel & Anthis, 2001) demonstrates the significance of possible selves in young adults’ and adolescents’ identity development (Dunkel, 2000) and seems to support the role of future identities in the formation of a meaningful identity.

Recently, Vignoles and colleagues (Vignoles, Manzi, Regalia, Jemmo, & Scabini, 2008) have investigated the influence of identity motives, i.e. motives influencing identity construction (Vignoles, Regalia, Manzi, Gollidge, & Scabini, 2006) on the construction of future selves. They focused on motives of self-esteem, continuity, distinctiveness, belonging, efficacy, and meaning (see Vignoles et al., 2006, for a discussion of different identity motives). Past research at least implicitly assumed that the degree to which they enhance individuals’ self-esteem determines which possible future selves are desired or feared by the individual. Indeed, Vignoles and colleagues found that future selves were highly desired if they promised feelings of self-esteem. However,

¹¹ This change is suggested to be a gradual one, since the sudden change of an identity may lead to feelings of loss and distress. Indeed, King and Raspin’s (2004) research on lost future selves in divorced women shows that a clear and accessible image of the self one ‘might have been’ can result in lowered life satisfaction, meaning in life, and heightened distress.

future selves are also more desired if they are associated with feelings of efficacy, meaning, and continuity (Vignoles et al., 2008, Study 1). The effect of the belonging motive appeared to be mediated by the self-esteem motive¹², and the distinctiveness motive seemed to play a less significant role, once belonging and self-esteem motives were controlled for (Vignoles et al., 2008).

There is also some initial support that future selves are influenced by different identity motives than current identities. For current identities, self-verification appears to be an important mechanism influencing behaviour (e.g., Swann, 1987). In contrast, future selves have been theorized to serve as behavioural standards (e.g., Hoyle & Sherrill, 2006; Oyserman et al., 2006) and are likely to involve change of some form (Vignoles et al., 2008)¹³.

2.1.4 Future selves as stories versus collections of self-identities

Two different methodological approaches to future selves can be identified, which reflect different conceptualisations of future selves¹⁴. Some researchers employ a narrative approach (e.g., Gonzales, Burgess, & Mobilio, 2001; Hoyle & Sherrill, 2006; L. A. King & Hicks, 2004, 2007; L. A. King & Rospin, 2004; L. A. King, Richards, & Stemmerich, 1998; L. A. King & Smith, 2004; Krieschok et al., 1999; Leondari, Syngollitou, & Kiosseoglou, 1998; Ruvolo & Markus, 1992; Segal et al., 2001), which implies a focus on the characteristics of one single future self rather than the composition of a set of future selves. This reflects a view of the self as a narrative or story (e.g.,

¹²This finding is consistent with sociometer theory (Leary & Baumeister, 2000) which proposes that the satisfaction of the need for belonging is monitored and regulated through processes of self-esteem. Indeed, recent longitudinal findings provide evidence that social acceptance prospectively predicted self-esteem, rather than the other way around (Srivastava & Beer, 2005).

¹³ However, as Vignoles and colleagues (Vignoles et al., 2008) point out, future selves may also involve maintaining characteristics of the present self.

¹⁴ Methodological approaches to the assessment of future selves will be discussed in detail in Chapter 3. The focus in this chapter is on the different conceptualizations of future selves and ultimately the conceptualizations of identity they imply.

McAdams, 1996; McAdams, 2001; see also Singer, 2004) which, like other identities, is constructed through sense-making processes (Weick, 1995).

Other research (e.g., Aloise-Young et al., 2001; Carver, Reynolds, & Scheier, 1994; Cross & Markus, 1991; Oyserman et al., 2006; Oyserman, Bybee, Terry, & Hart-Johnson, 2004; Oyserman & Fryberg, 2006; Oyserman et al., 1995; Oyserman & Markus, 1990; Oyserman & Saltz, 1993; Oyserman et al., 2002; Packard & Nguyen, 2003; Yowell, 2000) explores the composition of possible selves in the self-concept (Markus & Wurf, 1987), focusing on single adjectives reflecting a possible self (e.g., “happy”, “successful”).

These different approaches also reflect a conceptualisation of future selves either as constructed and negotiated in social interactions (Goffman, 1959), or as retrieved from a set of available identities in the dynamic self-concept (Markus & Wurf, 1987). Irrespective of their conceptualisation as a socially negotiated story or as a collection of simple self-identities, future selves can vary in terms of the value the individual places on them, and in terms of their valence as a feared or hoped for identity. Other characteristics of a future self are specific to its conceptualisation such as the elaboration of a future self narrative, or the balance within a set of future selves.

The methodological implications of these different conceptualisations of future selves and the methodological choice this thesis is based on are described in detail in Chapter 3.

2.1.5 Characteristics of future selves

Below, I first focus on features of future selves that reflect their centrality in the self-concept, before discussing elaboration, valence and certainty, and level of self-definition as further characteristics of future selves.

Different identities within an individual's self-concept differ in their centrality (Markus & Wurf, 1987). The centrality of an identity determines its influence on affect and behaviour. Identities that are core conceptions (Gergen, 1965), or salient identities (Stryker, 1986), will be activated more frequently and have a stronger influence on behaviour than more peripheral identities (Stryker & Serpe, 1994). There are three different, but connected

characteristics of future selves that I argue relate to the centrality of identities in the self-concept: accessibility, importance, and exclusivity.

2.1.5.1 Accessibility

In order to have an influence on behaviour, future selves, like all other identities, need to be kept active in the working memory, or, more specifically, the working self-concept (Markus & Wurf, 1987). Like other mental constructs, identities can become chronically accessible if we frequently think of them and use them (Bargh, 1982; Higgins, King, & Mavin, 1982; Srull & Wyer, 1986).

Activated future selves organize and energize individuals' behaviour aimed at bringing them about (Leonardi et al., 1998). The accessibility¹⁵ of a future self reflects the degree to which it is clear and easy to imagine for the individual (L. A. King & Raspin, 2004). A highly accessible future self is a self the individual often thinks about.

In addition to strengthening the link between a future self and behaviour, the accessibility of future selves can also influence individuals' well-being. King and colleagues find accessible positive possible selves positively, and accessible negative possible selves negatively related to subjective well-being¹⁶ (L. A. King & Raspin, 2004; L. A. King & Smith, 2004).

2.1.5.2 Importance

Pelham (Pelham, 1991; Pelham & Swann, 1989) identified certainty and importance as the underlying dimensions of identity standards. A standard (such as a future self) the current self is compared to, can vary in how important it is to the individual and how certain a person feels about this level of importance¹⁷. These dimensions appear to be relatively independent of each other. While how certain a person is about the value of this standard seems to

¹⁵ sometimes also referred to as 'saliency'

¹⁶ I will be exploring the reciprocal relationship between mood and future selves in Chapter 7.

¹⁷ Note that this definition of certainty is different from the one discussed in 2.1.5.5.

be associated with informational factors such as the feedback they receive about the self in different situations, the importance of a self standard seems to reflect emotional and motivational factors (e.g., how much a person values being attractive, intelligent, etc) (Pelham, 1991; see Kerpelman & Lamke, 1997; Kerpelman & Pittman, 2001, for an application to future (career) identities). Importance refers to the commitment to a future self. This commitment to an identity leads to more striving towards its attainment (Wicklund & Gollwitzer, 1982). Individuals who are committed to a specific identity want to make it an enduring part of who they are. Some researchers have treated the importance of a future self as an outcome variable that is influenced by other characteristics such as the availability of the future self in the working memory or the perceived control over its attainment (Norman & Aron, 2003). However, this research was correlational in nature, and to date there is little longitudinal research investigating the causal direction between the importance of a future self and its other characteristics.

2.1.5.3 Exclusivity

Activated future selves render competing identities less accessible (Bandura, 1986; Harter, 1981). The higher an identity's relative salience, the stronger will its influence on behaviour be. While accessibility and importance of future selves have been the focus of previous research, the *relative* accessibility of a future self in relation to competing future selves has received little attention (see R. Strauss & Goldberg, 1999, for an exemption)¹⁸. I propose this additional dimension of future selves as another indicator of the centrality of the identity in the self-concept that may determine their influence on behaviour.

2.1.5.4 Elaboration and specificity

The elaboration of a future self refers to the detail and vividness (and the emotional depth) of future self narratives. It reflects the richness of the future self narrative (L. A. King & Raspin, 2004), and is related to, but distinct

¹⁸ Strauss and Goldberg (1999) used a pie chart as a visual method to assess the relative salience of home versus career selves in first-time fathers.

from the accessibility of future selves. Laura King and colleagues (e.g., L. A. King & Raspin, 2004) focus on both accessibility (or “salience”, p. 603) and elaboration in relation to future self narratives:

Although clearly related, salience and elaboration are distinct aspects of possible self narratives. Salience refers to the person’s subjective sense that they think about the scenario a great deal, that it plays a substantial role in the person’s daily mental life. Elaboration refers to the narrative richness of the self, as judged by an observer. A possible self narrative can be highly salient to a person without necessarily being richly described. Conversely, a narrative can be filled with rich detail – a person may construct (or reconstruct) a quite elaborate description of her life in the future – without having thought about it very much for quite some time. (L. A. King & Raspin, 2004, p. 605)

This quote demonstrates the relevance of the accessibility of a future self in an individual’s self-concept regardless of whether future selves are conceptualised as socially constructed stories or as readily available identities that are activated in the working self-concept, and seems to point towards the possibility of bridging the conceptual divide between these conceptualisations. Elements of a future self (such as “being an outstanding scholar” or “being a good friend”, which by some researchers would be considered as individual future selves) may be more or less accessible in an individuals’ working memory which may influence their inclusion into the (socially) constructed future self narrative. In addition, frequent activation of a future self in the working memory may afford individuals more time to spend on the construction and elaboration of a future self story.

Evidence for a stronger effect of clear specific goals on behaviour comes from goal setting theory (Locke & Latham, 2002; Locke, Shaw, Saari, & Latham, 1981). Similarly, elaborate future selves may have a stronger influence on behaviour. A more elaborate image of the possible future can serve as a more effective basis of mental simulation which seems to increase motivation and emotional involvement as well as facilitate the generation of plans and problem-solving strategies (Taylor, Pham, Rivkin, & Armor, 1998).

An aspect closely related to elaboration is thus the specificity of future self narratives. Leonardi and colleagues (1998) found that students with specific, elaborate positive selves outperformed students with general, vague and stereotypical positive future selves in academic achievement which seems to support the idea of a stronger motivational effect of more elaborate future selves. Just like elaboration, the specificity or concreteness of a future self will determine its effectiveness as the basis for mental simulation. Similar to lower-order goals, more specific future selves are likely to have a stronger influence on behaviour.

2.1.5.5 Valence and certainty

Markus and Nurius (1986) originally distinguished between the desirability of a possible self (“how much they would like the item to be true for them”) and the likelihood of its attainment (“how probable the possible self was for them”, p. 958) as two dimensions a single possible self could vary on. Oyserman and colleagues (Oyserman & Markus, 1990) however distinguished between hoped for selves (“possible selves that you most hope to describe you”) and expected selves (“possible selves that are most likely to be true of you”, p. 115)¹⁹. I argue that in order to influence individuals’ behaviour, a possible self needs to be at least considered possible, and draw on Markus and Nurius’ (1986) original conceptualisation of future selves as varying in certainty, and valence.

Their fundamental distinction of hoped for future selves²⁰, selves one would like to become, and feared future selves one is afraid of becoming

¹⁹ In her later work (Oyserman et al., 2006; Oyserman et al., 2004; Oyserman & Fryberg, 2006; Oyserman & Saltz, 1993; Oyserman et al., 2002), Daphna Oyserman does no longer include the distinction between hoped for and expected possible selves, but only contrasts expected selves with feared selves to estimate the degree of balance in possible selves.

²⁰ Positive self-standards can be further distinguished into ideal and ought selves (Higgins, 1989, 1998). While in Higgins’ conceptualization these self-standards are not explicitly future-oriented, this distinction is also relevant in relation to future selves and will be discussed in more detail below.

(Markus & Nurius, 1986) has remained a prominent focus of research on future selves.

As negatively evaluated selves feared future selves provide reference values in avoidance motivational systems, while hoped for future selves engage approach motivational systems (Carver & Scheier, 1990b; Higgins, 1998; see Chapter 7 for a more detailed discussion). Feared future selves are considerably rarer than hoped for future selves. Markus and Nurius (1986) asked respondents to rate the extent to which they considered each of a list of positive and negative selves a possible future self for themselves and report an almost four to one ratio of positive possible selves to negative possible selves. In an open-ended response format, Cross and Markus' (1991) participants provided between 7.6 and 5.7 hoped for possible selves, and between 5.1 and 3.1 feared selves, depending on their age. In addition to be less frequent than positive future selves, feared future selves have also been found to be less elaborate (Leonardi et al., 1998).

Two different theoretical perspectives on the effect of feared future selves can be identified. Research on avoidance motivation (e.g., Atkinson, 1964; Bandura, 1986; Carver & Scheier, 1981, 1990b; Higgins, Roney, Crowe, & Hymes, 1994; Lewin, 1951) suggests that avoidance goals are less effective in the regulation of behaviour (Carver & Scheier, 1981, 1990b; Elliot, Sheldon, & Church, 1997). Avoidance goals are associated with negative affectivity (Elliot & Trash, 2002), and have a negative effect on subjective well-being (Carver & Scheier, 1999; Elliot et al., 1997). The pursuit of avoidance goals leads to low perceptions of goal progress and is likely to be associated with feelings of anxiety, threat, and worry (Elliot et al., 1997). Consequently, feared future selves may be less effective in motivating behaviour. They are likely to provide a less effective basis of mental simulation. A vision of what one does *not* want one's future to be like may be less effective at identifying, for example, future skill requirements.

Research by Oyserman and colleagues however shows that "balanced" future selves, matched hoped for and feared future selves, will maximize individuals' motivation (Oyserman & Markus, 1990; Oyserman & Saltz, 1993; Oyserman, Terry, & Bybee, 2002; Oyserman et al., 2004). When future selves

are balanced, individuals select strategies that both increase the likelihood of becoming their hoped for future self and decrease the likelihood of becoming their feared future self, which results in increased effort and more effective self-regulation (Oyserman & Markus, 1990; Oyserman & Saltz, 1993). In a sample of 101 13 to 16 year old delinquent and non-delinquent pupils, Oyserman and Markus (1990) found that 33% to 37% of officially delinquent youth held a feared self of becoming criminal. In contrast to the feared selves of non-delinquent pupils, these feared selves were however not matched with expected selves focusing on avoiding crime and having a job or getting along well in school. Future selves need to “balance positive expectations with concerns” in order to provide an effective basis of self-regulation (Oyserman et al., 2004, p. 145).

While this line of research suggests a beneficial effect of feared future selves (in concert with corresponding hoped for selves) on self-regulation, linking goals to the avoidance of feared future selves seems to have a negative effect on individuals’ well-being. King, Richards and Stemmerich (1998) explored the link between individuals’ life goals and worst fears, and their daily goals. Daily goals were content-analyzed in terms of their relevance to the attainment of individuals’ life goals, and the avoidance of their worst fears. Consistent with research on avoidance goals cited above, working on daily goals avoiding one’s worst fears was negatively related to subjective well-being. Goal progress moderated the relationship between the avoidance of worst fears and subjective well-being. Individuals who perceived little progress towards a goal linked to avoiding their feared future experienced the lowest levels of subjective well-being²¹.

In summary, feared future selves may be associated with less effective avoidance sub-goals or provide an additional motivational incentive to set approach goals. The main focus of this thesis is on hoped for future selves, which, as I will discuss later, are likely to be more effective in motivating

²¹ Progress at daily goals linked to accomplishing one’s life goals had a significantly stronger relationship with subjective well-being than progress at daily goals unrelated to one’s life goals.

proactive behaviour than feared future selves. However, feared future selves and the inclusion of feared elements in future self narratives will be explored in more detail in Chapter 7.

2.1.5.6 Levels of self-definition

Future selves can further be considered at three levels of the self-concept (Lord et al., 1999). The three levels of the self-concept that future selves can be allocated are the personal self, the relational (or interpersonal) self, and the collective self (Brewer & Gardner, 1996).

Individuals can focus on the characteristics that differentiate them as an individual from other individuals (personal self).

They can also think about themselves in relation to the roles that define them, and can take pride in fulfilling those roles appropriately (relational or interpersonal self). Interpersonal-level future selves thus reflect role-relationships. An employee may picture herself as being a good follower who is liked and respected by her supervisor; she might also imagine herself as not fulfilling her supervisors' expectations and having a tense relationship with her.

Finally, individuals can also think about themselves as part of the group they identify with and focus on characteristics they share with other group members (collective self). Future collective selves are representations of what the collective an individual identifies with can become. An employee may imagine her team becoming an uplifting and inspiring environment, where team members have supporting and positive relationships with one another. A corresponding feared future self would be the team becoming a difficult environment to work in, and that might even fail to reach performance targets.

While there is a substantial body of research on personal future selves (see 2.1.1), relational and collective future selves have received relatively little attention.

Based on the more general notion of future selves as elaborated above, I below introduce the more specific construct of future work selves (FWS), which describes the future self in relation to the workplace.

2.2 Future work selves – The future self in the work context

In this section I develop a conceptual framework to describe the fundamental features of the FWS (future work self). I define the FWS as a hoped for image of the personal, relational, or collective self at work in the future that is different to the current self. This definition identifies three important features of FWS that I explain in more detail below.

2.2.1 Future focus

First, all FWS are about a view of the self at some point in the future. Although goals are representations of the future in some way, they vary in how far into the future they extend (Nuttin, 1985). Research on future selves has explored participants' future selves for the next year (e.g., Aloise-Young et al., 2001; Kemmelmeier & Oyserman, 2001; Oyserman & Markus, 1990), the next 4 (Norman & Aron, 2003) or 5 years (Anderman et al., 1999), or has left it up to participants to set the time frame for the future self they were asked to imagine (e.g., Cross & Markus, 1991; Hoyle & Sherrill, 2006; L. A. King & Smith, 2004; Oyserman & Saltz, 1993). Future selves can be relatively short-term or more long-term.

While I refer to “future selves” throughout the above review, not all possible selves in the literature are explicitly future-focused. Possible selves can also refer to selves we could have been (Obodaru, 2008), or selves we believe we could be now (Ibarra, 1999). However, present- and future-oriented self-standards have different implications for motivation and affect. This also ties into the defining feature of FWS I will be discussing next, discrepancy. Unlike with current self-standards, the discrepancy between the present self and a desired *future* self does not necessarily lead to negative self-evaluation. A representation of the attributes one would like to possess *now* has different implications for motivation and affect than a representation of what one hopes to be in the future. The present self can be compared to two types of (positive) reference points (Boldero & Francis, 2000, 2002): desirable states for the self in the present, and reference values which represent desirable future states. A discrepancy between the current self and a desirable present state will be

associated with negative emotions, which will be stronger if the discrepancy is larger. Congruence between the current self and a desirable present state will result in positive emotions and attempts to maintain this congruence. Desirable future states on the other hand are by definition discrepant from the current self, and discrepancies do not necessarily lead to negative affect. The experienced emotion is unlikely to be related to the magnitude of the discrepancy, but rather to the progress being made towards the desired future state. Following this distinction, the discrepancy between a current self and a desirable future self will not necessarily lead to negative affect (see below for a more detailed discussion of discrepancy). Individuals' affective reactions to a discrepancy between their present self and their future work self are more likely to depend on their perceived progress towards their desired future, and on their perceived ability to bring it about.

Future selves allow individuals a more playful approach to their self-definition (Ibarra, 1999, 2007). Future selves are the elements of the self-concept that are likely to be most flexible and adaptable. Individuals have considerable freedom to define and redefine their significant future selves, particularly so if they are not shared with others (Cross & Markus, 1991). Their greater temporal distance affords individuals greater opportunity for taking risks because it provides some latitude for correction – “a cushion of resources” (Pennington & Roese, 2003, p. 253). Temporal distance increases the relative importance of promotion- over prevention focus (Pennington & Roese, 2003). Promotion and prevention strategies are two different ways of addressing the gap between the current self and a future self²². At a greater temporal distance individuals are better equipped to adopt a promotion focus and pursue maximal goals (Pennington & Roese, 2003). A promotion focus in turn fosters greater risk taking, creativity and openness to change (Lieberman, Idson, Camacho, & Higgins, 1999; Lieberman, Molden, Idson, & Higgins, 2001). Thus future work selves potentially stretch individuals' aspirations, and broaden their creative thinking about future possibilities.

²² The link between the FWS and self-discrepancy theory will be discussed in more detail in 2.2.3.

2.2.2 Discrepancy

The second defining feature of FWS is that the self-image is different from the current self. The FWS is not simply an extrapolation of the current self to a future time point. Hoyle and Sherrill (2006) propose that future selves can only influence current behaviour if they are discrepant from the current self. A future self that does not differ from the current self does not generate a discrepancy, and thus not initiate behaviour.

Similarly, Vignoles and colleagues (2008) propose that future selves are likely to involve change. They however acknowledge that they may also involve maintaining characteristics of the present self, satisfying the identity motive of continuity. Assuming an employee has achieved her future self and works in her dream job, her hoped for FWS would be identical to her present self. Her present self would then guide behaviour to prevent any change of this ideal situation. While preserving an ideal state may – especially in uncertain environments – require a substantive amount of anticipation and self-started behaviour, the individual will not be motivated to initiate change, but try to prevent it. She will not be oriented towards the future, but focused on an ideal present. Her regulatory focus will switch from a promotion focus to a prevention focus, and she will no longer try to initiate change to reach a match with a desired situation, but she try to prevent change to avoid a mismatch with the current, desirable situation. I discuss the relationship between the FWS and regulatory focus in more detail below. I propose that it is highly unlikely for an individual to have such a static self-view. By the time a specific future self has been achieved, a new image of a desirable future will have been created that will again orientate the individual towards the future. The employee in my example above will very likely set herself new goals and further develop her future work self.

The notion of discrepancy is therefore intrinsic to the concept of FWS, while the degree of discrepancy can vary. As argued above, unlike with other types of self-standards, the discrepancy between the present self and a desired future self does not necessarily lead to negative self-evaluation. The PhD student in the example above will not feel bad about the great discrepancy between her current self as a student and her desired future self as a

distinguished scholar and respected teacher. A broad and distant future self that is held for many years can be a source of (sub-)goals over a long period of time. As long as an individual believes that success will be forthcoming some time in the future, a negative discrepancy will not lead to negative affect (Carver & Scheier, 1990a; Hsee & Abelson, 1991). The role of future selves in creating a discrepancy that is not threatening to individuals' self-concept facilitates the setting and pursuit of change-oriented goals as I argue below.

2.2.3 Hoped for self

Third, FWS concern a hoped for future that is desirable and positive for the individual. I confine my attention to hoped for future selves rather than feared future selves to simplify the initial exposition of FWS. Although FWS might also include the avoidance of feared components (see Chapter 7), I expect that the hoped for aspect will be particularly important for motivating proactivity.

First, as already discussed above, hoped for possible selves are more frequent than feared possible selves. Markus and Nurius (1986) asked respondents to rate the extent to which they considered each of a list of positive and negative selves a possible future self for themselves and report an almost four to one ratio of positive possible selves to negative possible selves. Second, hoped for possible selves involve positive feelings. In turn, positive affective states broaden cognitive-action repertoires and hence are likely to encourage engagement in proactive behaviour (Bindl & Parker, in press; Parker, 2007a). Compared to negative feelings, positive affect can motivate individuals to set more difficult and challenging goals (Ilies & Judge, 2005). Third, while hoped for possible selves provide a motivational resource that helps to persist in the pursuit of a future-oriented goal and may instil feelings of hope and optimism, feared possible selves only provide an image of what to avoid. While Oyserman and colleagues suggest that "balanced" future selves, matched hoped for and feared future selves, will maximize individuals' motivation (Oyserman et al., 2004; Oyserman & Markus, 1990; Oyserman & Saltz, 1993; Oyserman et al., 2002), in research on the production of behaviour desired end states have received more attention than undesired ones (see e.g., Carver & Scheier, 1981,

1990a; Gollwitzer & Bargh, 1996; G. A. Miller, Galanter, & Pribram, 1960; Pervin, 1989). Negative reference values like feared future selves have mainly been described in terms of inhibition of behaviour (e.g., Atkinson, 1964; Gray, 1970) and are not very useful in explaining why an individual initiates action. Positive end-states or goals explain individuals' movement towards them (Higgins, 1998). They motivate individuals to reduce the discrepancy between their current self and their hoped for future, while a feared future self would motivate individuals to maximize the discrepancy between the present self and a future that is to be avoided (see also 7.3 for a more in-depth discussion of hoped for versus feared future selves).

FWS in my conceptualisation are 'ideal selves' (Higgins, 1989, 1998). Ideal selves (ideal self-guides) refer to what individuals would ideally like to be and contain their wishes, hopes, and aspirations. 'Ought selves' (ought self-guides) on the other hand refer to individuals' perceived duties, obligations, and responsibilities, to what they think they ought to be. While both types of selves are desired end states, they are motivationally distinct (Higgins, 1998). Ideal selves are maximal goals (Brendl & Higgins, 1996), reflecting the most that one could wish for. They involve an unbounded range of even more desirable possibilities. Ought selves are minimal goals (Brendl & Higgins, 1996), reflecting what one could comfortably tolerate, the minimally acceptable outcome. Individuals try to achieve a match with their ideal self, and avoid a mismatch with their ought self (Higgins et al., 1994). Ideal selves have a promotion focus, and are concerned with aspirations, hopes, and accomplishments. Individuals are eager to achieve them. Ought selves have a prevention focus, and are associated with concerns for safety, responsibilities and obligations. Individuals are vigilant to assure safety; they are prudent and precautionary and want to avoid errors.

Even though the FWS in my conceptualisation can be classified as an ideal self since it provides a maximal goal and has a promotion focus, it is not identical with ideal self-standards in their original conceptualisation. Most research on ideal selves has not explicitly placed them in the future. Ideal self-guides might suggest a simple alternative to the current self and not give rise to a goal the individual strives to attain (Hoyle & Sherrill, 2006). In combination

with the location in the future, a desired future self allows individuals to create a discrepancy between their current self and a hoped for alternative that instils positive rather than negative feelings because it leaves scope for development.

Thus far, I have defined future work selves as a future-focused, hoped for (or ideal) image of the self in relation to work that is discrepant from the present self. As argued above, future selves can be found on different levels of self-definition (Lord et al., 1999): the personal, the relational, and the collective self (Brewer & Gardner, 1996).

2.2.4 FWS on different levels of the self-concept

Personal FWS. Drawing on the definition of FWS above, the personal FWS is a hoped for image of the personal self at work in the future that is different to the current self. It is based on the personal identity of an individual; their perceived similarities with, and differences from, other individuals. When identities on this level of the self-concept guide behaviour, individuals are concerned with experiencing their individuality and proving that they are distinct from others (Brewer & Gardner, 1996). Global self-worth is then based on favourable comparisons to others, and motives of self-enhancement, achievement and distinction are thus important. A future self that is personal is therefore about what the individual hopes to become as a unique individual. As Lord, Brown, and Freiberg described, "Individual-level identities fosters possible selves that reflect progress in terms of personal characteristics; becoming more skilled, wealthier, healthier, or better educated can be a powerful image that sustains and justifies current activities" (Lord et al., 1999, p. 179). I have shown an example of a personal FWS above. This quote shows a postgraduate research student's imagined future self, and reflects distinction and achievement as defined by the individual. Since FWS are highly reflective of individuals' values, imagined achievements are not necessarily restricted to monetary wealth or social status. Personal FWS can be concerned with themes

like creativity, discovery and happiness, and are likely to reflect developmental tasks²³ (Cross & Markus, 1991).

I propose that a personal FWS can motivate the setting and striving for proactive goals intended to enhance one's career and personal development. I will explore the mechanisms proposed to underlie the setting and pursuit of proactive goals below. Aiming to bring about their personal FWS, individuals will be likely to engage in career initiative, or proactive behaviours to intervene in, and sculpt their career instead of just reacting to opportunities, such as career planning, skill development, and consultation (Seibert et al., 2001; Tharenou & Terry, 1998). They might, for example, actively seek out ways to develop skills they know they will need for the future rather than waiting to be told they need to acquire these skills, or they might set up career planning discussions with a mentor or supervisor. In sum, a personal FWS is likely to motivate proactive person-environment fit behaviours. Proactive person-environment fit behaviour²⁴ refers to a higher-order category of proactive behaviours aimed at changing either oneself or the environment to achieve a better fit between the individual and the environment (Parker & Collins, 2009).

Below, I briefly discuss the link between personal FWS and proactive feedback seeking and job role negotiation as two examples of proactive person-environment fit behaviours (Parker & Collins, 2009). When individuals engage in proactive feedback seeking, they actively gather information about their behaviour, either by directly asking for feedback or by actively monitoring the situation and others' behaviour (Ashford, 1986; Ashford & Cummings, 1983). With proactive feedback seeking, the aim is to gather information to better respond to the demands of the environment, and thereby perform more effectively within the context (Ashford & Black, 1996). By gathering

²³ The concept of the developmental task originated in the 1930's, originally as an "outgrowth of Freudian psychology" (Havighurst, 1956, p. 215). Havighurst defines a developmental task as "a task which arises at or about a certain period in the life of the individual, successful achievement of which leads to his happiness and to success with later tasks, while failure leads to unhappiness in the individual, disapproval by society, and difficulty with later tasks" (1956, p. 215).

²⁴ Person-environment fit proactivity will be the focus of Chapter 6.

information on their progress, the individual can move closer towards their personal FWS.

Job-role negotiation refers to an individual's attempts to change their job so that it better fits their skills, abilities, and preferences (Ashford & Black, 1996; Nicholson, 1984). It involves, for example, negotiating task assignments, role expectations, and desirable job changes. It is a proactive behaviour that aims to achieve fit between what is valued by an individual and what is supplied by the environment (Edwards, 1996). For example, an individual working as a waiter in a café might hold a personal FWS that involves managing a franchised café in the future. This individual is likely to want to do well within their current job, and will engage in career initiative, seek feedback to improve their performance, and work to ensure a good fit between their abilities and values and the demands of the job.

If, however, staying and doing well in the current job, team, or organization is not seen as helpful to one's career progression and fulfilment of personal development goals, I predict that a personal FWS will motivate proactive career and development behaviours that are directed outside of the job, team, or organization. This could include, for example, proactive job search behaviours (Kanfer et al., 2001; Saks & Ashforth, 1999), actively building networks to increase opportunities for jobs, and initiating skill development outside of the job (such as starting a new degree). For example, an individual might be working in a café, but hold a FWS that involves being a nurse. This personal FWS is likely to motivate the individual to seek out an opportunity to begin nurse training, and therefore their focus for career initiative will be outside of the specific job.

Both of these examples of individuals with a personal FWS they are aiming to bring about contrast with the example of an individual working in a café who does not have a clear hoped-for view of themselves at work in the future that differs from their current situation. This individual is less likely to set proactive goals aimed at career achievement or personal development, either within or outside the organization.

In summary, I propose that personal FWS will motivate proactive behaviours aimed at improving one's career and personal development. To the

extent that the individual perceives that doing well in their current job, team, or organization is relevant to their personal FWS, they will be motivated to engage in behaviours such as proactive feedback seeking and job role negotiation. If the personal FWS involves a future outside the current job or organization, proactive career behaviours will be directed outside of the current job and organization.

Relational FWS. The relational level involves the self-concept being defined in terms of roles that specify one's relationship to others. Self-worth depends on appropriate role behaviour, such as being a good child, a good leader, or a good colleague. The basic motivation of identities at this level of the self-concept is the welfare of the dyad. Fulfilling one's role becomes an end in itself. Many professions can be experienced in terms of specific role-relationships (Brewer & Gardner, 1996). For example a nurse can construct his or her identity in terms of interpersonal relationships with patients (Millward, 1995). Such an identity will influence behaviour. As Lord and colleagues discussed "possible selves tied to improved role relationships – being respected by superiors and colleagues or loved and understood by one's spouse – can motivate continued efforts at maintaining or improving social relations" (Lord et al., 1999, 179).

In the work sphere, a relational FWS refers to a hoped for image of the relational self at work in the future that is different to the current self. This might mean, for example, seeing oneself as having enhanced relationships with colleagues, clients or customers, and supervisors in the future, or it might involve seeing oneself as having new roles or relationships that one does not currently have. The example below shows a relational FWS of a graduate nurse who has a clear and vivid view of herself as fulfilling the role of carer that involves her relationship with her future clients.

As a psychiatric nurse I will challenge barriers between clients and myself. This means that I will be able to facilitate openness that will enable the healthy development of a relationship, and of the self-identity of the client. [...] as a psychiatric nurse I will have the skill of therapeutic engagement. I will strive to build a true connection in any given situation, in order to come to know the world of the client and in

order to look at making positive changes in their lives. Graduate in Psychiatric Nursing program, published on-line in the e-magazine of Brandon University, <http://www.ecclectica.ca/issues/2003/1/young.asp>

I propose that a relational FWS will motivate proactive behaviours aimed at developing and/or improving the relevant role relationship. If an individual's future view involves having a positive relationship with a supervisor that one does not currently have, then this will motivate proactive efforts to build and develop a stronger relationship. When the relationship focus is colleagues, individuals might engage in proactive efforts to build and maintain relationships, such as engaging in proactive forms of helping (for example, anticipating a colleague's needs and offering help). Proactive behaviours such as network building and skill development will be likely to be motivated by a relational FWS that includes new relationships that currently do not exist. The graduate nurse in the example above will be motivated to acquire the skills that enable her to establish positive relationships with her future clients. This goes beyond acquiring the knowledge required for being a proficient psychiatric nurse. Similarly, a teacher will seek out new teaching methods to engage and inspire students if he holds a relational FWS that includes a positive role-relationship with students. A relational FWS that involves one's relationship with clients can encourage employees to anticipate future needs of their clients, and motivate them to develop not only themselves but also initiate change in their teams and organizations that will enable them to improve their relationship with clients.

Collective FWS. The third type of identity is a collective one. On this level of the self-concept, individuals experience themselves as interchangeable members of the group they identify with. They perceive their identities in terms of the characteristics they share with the group (the group prototype). They focus not on what makes them a distinguishable individual, but on characteristics and values they share with other group members (Brewer & Gardner, 1996). In the work sphere, a collective FWS refers to a hoped for image of the collective self at work in the future that is different to the current self.

I propose that a collective FWS will promote proactive behaviours directed towards achieving the hoped for future of the team or organization – behaviours aimed at taking control of, and bringing about change within, the internal organizational environment such as improving work methods, voicing suggestions, or preventing problems, as well as behaviours aimed at initiating change at a more strategic level.

For example, taking charge concerns constructive efforts by employees to effect organizationally-functional change with respect to how work is executed (Morrison & Phelps, 1999). A collective FWS captures an individual's identification with the collective and also provides a vision of it as different in the future, enabling the individual to take charge to help bring about this vision.

A collective FWS that is strongly focused on the team may motivate "team role proactivity" (M. A. Griffin et al., 2007, p. 332), i.e. behaviour directed towards changing the team – either its internal functioning – or its links and position in the wider organizational environment. If the collective FWS is focused on the organization level, then this will motivate proactive behaviours directed to the wider organization. This might be, for example, enhancing or developing organization-wider practices (M. A. Griffin et al., 2007, refer to this as "organization member proactivity", p. 332) or it might motivate proactive strategic behaviours (Parker & Collins, 2009). This includes behaviours such as issue selling and strategic scanning that are concerned with taking control of, and causing change in, the broader organization's strategy and its fit with the external environment. For example, issue selling involves managers proactively influencing the formation of strategy in organizations by making others aware of particular events or trends in the environment (Dutton & Ashford, 1993). Through bringing critical issues to the attention of leaders, issue selling aims to influence and change the strategy of an organization, and ultimately its performance. Strategic scanning similarly has an organizational focus, being concerned with proactively improving the organization's fit with the environment, such as by identifying future organizational threats and opportunities (Parker & Collins, 2009). To the extent that individuals are strongly invested in the future of the wider organization, beyond the particular

team or group they are involved in, they are more likely to be proactive in this more strategic way.

Summary. FWS can be found at different levels of the self-concept, and are likely to motivate the setting and pursuit of proactive goals aimed at benefitting different targets (c.f. Belschak & Den Hartog, in press). Personal FWS are likely to motivate person-environment fit proactivity. I will be exploring this idea in more detail in Chapter 6. Relational FWS are proposed to motivate proactive behaviours aimed at benefitting present or future role-relationship. Depending on the group an individual identifies with (such as the team or the organization), collective FWS may motivate proactive work behaviours and proactive strategic behaviours which are likely to make a particularly crucial contribution to organizational performance (Crant, 2000; Rank et al., 2004). Below, I focus on the mechanisms through which FWS may motivate the setting and pursuit of proactive goals.

2.3 Future work selves motivate proactivity

As I have outlined above, research on proactive behaviour has emerged from an increasing acknowledgement of individuals' agency (Grant & Ashford, 2008), and has recognized that proactive behaviour is guided by self-set goals. As discussed in 1.2.3, much attention has been given to environmental and dispositional variables that make the setting and pursuit of these goals more or less likely, and on processes of expectancy and valence that may act as proximal antecedents (Frese & Fay, 2001; Parker et al., forthcoming; Parker & Collins, 2009).

Much research has focused on expectancy judgements in relation to proactive behaviour, which is reflected in the prominence of self-efficacy as an antecedent which has already been mentioned above. It is partly on the basis of efficacy beliefs that individuals "choose what challenges to undertake, how much effort to expend in the endeavour, how long to persevere in the face of obstacles and failures, and whether failures are motivating or demoralizing" (Bandura, 2001, p.10). Similarly, goal setting theory states that individuals' confidence in their ability to attain the goal, their self-efficacy, is one important mechanism that influences their commitment to a goal.

However, as discussed in 1.2.5, for individuals to pursue a goal this goal does not only have to be attainable, it also needs to be valued (Vroom, 1964; Yukl & Latham, 1978). Social cognitive theory and expectancy theory both distinguish the value individuals place on an expected outcome from their confidence (or expectancy, respectively) to achieve this outcome. Employees also need to have a reason to be proactive (Parker et al., forthcoming; Parker & Collins, 2009), believing that their proactive action is important for fulfilling their perceived responsibilities, goals, or aspirations (Parker et al., 2006). This idea is broadly supported by previous research. Individuals who feel responsible for bringing about change – that is, experience higher levels of ‘felt responsibility for change’ - are more likely to engage in taking charge (Fuller et al., 2006; Morrison & Phelps, 1999). Likewise, studies have shown that individuals who define their role broadly so that they feel responsibility for longer-term goals (i.e., have a ‘flexible role orientation’) are more motivated to engage in proactive behaviours that help to achieve longer term work goals than individuals who define their role more narrowly (Ohly & Fritz, 2007; Parker, 2007b).

This second mechanism, that employees need to see proactive behaviour as meaningful, as relevant to their long-term goals, responsibilities, or aspirations, has had relatively little attention in the literature, and is thus far a rather under-developed theoretical perspective. It is not clear why, for example, some employees have different role orientations to others, nor where a sense of felt responsibility for change derives from. In general, we do not know much about why some individuals have goals, aspirations, or ways of thinking about their role and their future that lead them to want to be proactive.

I propose that the concept of individuals’ future work selves provides an overarching theoretical perspective for understanding how some individuals set proactive goals because they see them as relevant to their future. This concept thereby integrates and extends existing literature on the value proactive behaviours can have for individuals.

In the context of the “reason to” judgements elaborated above as part of Parker et al.’s (forthcoming) expectancy-valence based model, future selves relate to the usefulness or utility of proactive goals. In Eccles et al. (1983)

original conceptualisation the utility value of a goal (or task) reflects the degree to which it relates to current and future goals. Parker et al. (forthcoming) broaden this definition and understand the utility of a proactive goal as the degree to which it relates to current and future higher-order goals such as identities and values (c.f. Cropanzano et al., 1993). As discussed above, the utility of a proactive goal is not evaluated on the basis of contingencies, but is based on its relation to enduring interests and deeper beliefs.

In this thesis, I focus on how proactive goals can derive their utility from being linked to future-oriented identities, i.e., future selves. To develop this argument, I next propose how FWS can lead to the generation of proactive sub-goals. I then describe how FWS motivate persistence to achieve proactive goals.

2.3.1 Setting of proactive goals

As discussed above, proactive behaviour is self-starting; that is, actions are initiated by the individual (Crant, 2000; Frese, 2005; Frese & Fay, 2001; Frese et al., 1997; Grant & Ashford, 2008; M. A. Griffin et al., 2007). Proactive goals cannot be assigned; they are always self-set (Frese & Fay, 2001). Even when employees are encouraged to “be proactive” the path they choose cannot be specified (Frese, 2005; Frese & Fay, 2001). However, little research has investigated how these goals are generated and where they are derived from. I propose that they are generated as part of the creation of discrepancies between the present and a desirable future.

The role of future discrepancies in motivating goal-directed behaviour has been studied extensively (e.g., Champion & Lord, 1982; Carver & Scheier, 1990a). Social cognitive theory proposes a dual control system of self-regulation in which positive discrepancies are created (e.g., challenging goals) and effort is directed towards resolving the discrepancy and experiencing reward. This resolution leads to the creating of further challenges to be mastered. As Bandura and Locke put it, “creating and removing discrepancies are two sides of the same coin” (2003, p. 91)(2003, p. 91). FWS play a crucial role in the generation of discrepancies that can be resolved by proactive behaviours.

The future self provides a vivid image of what the present can be changed to (c.f. Grant & Ashford, 2008). This imagination enables mental simulation (Kosslyn, 1987), it enables individuals to envision possibilities and generate plans to realize those possibilities about (Taylor, Pham, Rivkin, & Armor, 1998). It inspires the generation of proactive goals targeted at bringing this desired future about. In other words, a FWS provides an image of what the status quo could be changed to; it represents a highly desirable, ideal future that is different from the present. As such, it generates discrepancies between the current state and a desired future state and thus provides an impetus for change-oriented behaviour.

Proactive behaviour by definition involves change to improve the self or the situation (Crant, 2000; Grant & Ashford, 2008; Parker, 2000). Through proactive behaviours individuals intend to make a difference by changing the status quo, rather than by adapting to change that has already occurred or was initiated by someone else (Crant, 2000; Grant, 2008). This change must be perceived as desirable. The FWS is not only discrepant, it is also highly valued. As an ideal self it constitutes a maximal goal (Brendl & Higgins, 1996). As I have discussed above, it evokes a promotion focus (Higgins, 1998), that will encourage thoughts about accomplishments and aspirations and lead to a greater openness to change (Lieberman et al., 1999). A highly desirable FWS will focus individuals on their possibilities and distract them from concerns for safety, responsibility and obligations. The image of "what could be" will focus individuals on change and enable them challenge the status quo. It increases optimistic beliefs that the future will be positive that enable individuals to see change not as threatening but as a chance for improvement.

In sum, I argue that FWS enable the setting of proactive goals by adding value to self-set goals through their connection with a higher-order goal (utility), by enabling the mental simulation of the future required for anticipatory behaviour and by generating discrepancies that motivate behaviour. FWS play a role not only in the setting of proactive goals, but also in their pursuit.

2.3.2 Striving for proactive goals

In addition to motivating the setting of proactive goals, I propose the FWS facilitates greater striving toward proactive goals. While goal setting refers to what goals an individual chooses, goal striving refers to the behaviour towards an already existing, chosen goal (Lewin, Dembo, Festinger, & Sears, 1944). Even proactive behaviours with positive expected outcomes impose a major challenge to individuals' self-regulation. Their direction towards future impact makes them susceptible to temporal discounting (Ainslie, 1992; Ainslie & Haslam, 1992; Loewenstein & Prelec, 1992). The effects of a goal's valence and an individual's expectancy to attain it are weakened by the delay of its attainment (Steel & König, 2006). Individuals constantly undervalue the future in favour of the present (Akerlof, 1991). When they choose from a variety of possible attractive and achievable goals, they undervalue future events.

Future selves relate proactive goals with a distant outcome to a greater goal, to what one will be in the future, and thus – in the terms of theories of temporal discounting – add to their utility by increasing their value. Future selves are abstract, high-order goals with uncertain expectancies. But they enable individuals to put up with currently unsatisfying conditions because they perceive them as transitory step towards a more distant future (Fried & Slowik, 2004). Even though their temporal delay decreases the attractiveness of goals in the more or less distant future, future selves add something to the process of self-regulation that short-term rewards are unlikely to deliver; they provide a sense of purpose, of meaning and of direction. Striving to attain a highly desired and self-expressive FWS has immediate effects on one's self-evaluation and anticipated effects on future self-evaluation.

Self-generated goals are derived from individuals' self-identities and ultimately informed by their values (Cropanzano et al., 1993). As mentioned above, self-set goals reflect who we are. As a result, proactive goals that are related to FWS are self-concordant goals (Sheldon & Elliot, 1999). They are consistent individuals' authentic interests and core values and are integrated in the self. The interests and values they represent are enduring facets of individuals' personality, so these goals are likely to receive sustained effort over time (Sheldon & Elliot, 1999). The "volitional strength" (Gollwitzer,

1990, p. 58) behind them is greater than when goals are external. Self-concordant goals are not necessarily self-gratifying by themselves, but individuals pursuing self-concordant goals feel a sense of ownership over the goals they strive for (Sheldon & Elliot, 1999). Working towards a goal related to a hoped for identity becomes a “self-constructive effort” (Gollwitzer, 1986, p. 143).

When individuals aspire towards the attainment of future selves they strive for goals that represent not just achievements, but future self-definitions. I propose that future identities will enhance the intensity of goal striving. Holding an orienting image of the desired future in their mind enables individuals to persist when faced with resistance to change.

FWS focus individuals on progress rather than current states and allow them to tolerate currently unsatisfying conditions (Lord et al., 1999). The presence of a future-oriented self-concept, of an image of who one wants to be in the future, adds meaning to short-term action that would otherwise be judged mainly on its instrumental value. Employees who sacrifice short-term benefit for the sake of a more distant, more uncertain outcome do so because they look further ahead than their colleagues who are not prepared to do so. They choose short-term goals on the basis of their effects on a more distant future. When costly, effortful current actions can be seen as related to a desired future, they become highly valued (R. B. Miller & Brickman, 2004; Nuttin, 1985; Raynor, 1974).

Future selves also provide a sense of direction, hope, and optimism. This quality is particularly important in “weak” situations (Mischel, 1973) with no clear expectancies, where anticipated internal or external rewards do not provide a sufficient incentive. Future selves are not only a useful source of proactive goals; they also offer the motivational resource to persist in pursuing those goals by giving meaning to numerous proactive behaviours and by providing self-enhancement, and a sense of hope and optimism.

Individuals experiencing hope feel a sense of agency, of a “successful determination in meeting goals in the past, present and future” (Snyder et al., 1991, p. 570), and perceive that successful pathways towards these goals are available to them (Snyder et al., 1991). Hope is the will to succeed and the

(perceived) ability to identify and pursue the path to success (Snyder, 2000). Optimistic individuals hold a generalized belief that the future will be positive (Carver & Scheier, 2005). Optimists have less diverse future selves (Carver et al., 1994); they are less doubtful about their future and less afraid of “putting all their eggs in one basket”. Positive states-like concepts like optimism and hope (e.g., Luthans, Avolio, Avey, & Norman, 2007; Luthans & Youssef, 2007) are likely to have a reciprocal relationship with future work selves. Hopeful and optimistic employees are more likely to hold an image of a hoped for future, to feel in control over it, to have a sense of responsibility and ownership over the imagined future and to feel capable of identifying strategies for its pursuit. On the other hand the image of an ideal future can instil feelings of optimism and hope, and help sustain these positive state-like psychological capabilities (e.g., Luthans, Avey, Avolio, Norman, & Combs, 2006; Luthans et al., 2007; Luthans & Youssef, 2007). Hope, optimism, and other positive psychological capabilities enable individuals to persist in their goal pursuit (Luthans et al., 2007).

In summary, I propose that future work selves enhance striving towards proactive goals in a number of ways: they increase the value of proactive goals by relating them to individuals’ core values and interests, giving proactive goals a deeper meaning. This mechanism of utility has above been proposed to relate to the setting to proactive goals. Similarly, it contributes to the striving for these goals as goals linked to identities and values are self-concordant goals. In addition, future work selves facilitate goal striving through a reciprocal relationship with positive psychological capabilities such as hope and optimism.

2.4 The impact of contextual factors – Leadership as an example

Above I have briefly described how individuals' identity orientation can be influenced by the organizational context (Brickson, 2000, 2007) as an example of how context factors may determine the self-defining characteristic of FWS. Here I focus on leadership as a further example. Leadership is a potentially important contextual antecedent of proactivity (Crant, 2000), as I have mentioned above when discussing it as an organizational factor influencing individuals' expectancy- and valence judgements in relation to proactive goals. However, leaders managing proactive behaviour in the workplace are faced with what Campbell (2000, p. 57) called the "Initiative Paradox". Employees are required to show initiative and independent judgment, but the proactive goals they choose should still be in line with organizational goals. Leadership research has also emphasized leaders' ability to influence followers' self-concepts as the underlying mechanism of their impact on followers' behaviour (Lord et al., 1999). Future work selves suggest a number of paths through which leaders can influence self-concept and proactive behaviour and address the Initiative Paradox.

A particularly important aspect of leadership for proactivity is leader vision (M. A. Griffin, Parker, & Mason, in press). The communication of a vision that instils optimism and confidence, and is also specific and provides a sense of direction (Berson, Shamir, Avolio, & Popper, 2001), is one mechanism through which transformational leaders influence employees' performance. A successful vision conveys the future the organization is striving for in such lucid detail that employees can imagine themselves in that future (Levin, 2000). Leadership can create a context for FWS at each level of self-identity. First, at the collective level, leaders who articulate a future collective state that involves employees' self can inspire hope and justify unsatisfying current conditions (Lord et al., 1999). They shift employees' perspective from a short-term focus on rewards to a focus on long-term benefits, meaning and broader significance. Thus, the expression of a collective vision that includes employees' selves (or at least allows for them to imagine

themselves as part of the described future) can facilitate the creation of a collective future self or increase its accessibility and importance. At this level of the self-concept, individuals experience themselves as interchangeable members of the group they identify with. They perceive their identities in terms of the characteristics they share with the group (the group prototype) (Brewer & Gardner, 1996). They focus not on what makes them a distinguishable individual, but on characteristics and values they share with other group members. I propose that leaders can influence FWS directly through communication and through making certain identities more accessible in individuals' working self-concept. They can influence the degree to which employees feel in control of their personal, relational, and collective FWS, responsible for attaining them, and capable of setting proactive goals for bringing them about.

Second, leaders can also create a personal vision of an individual employee's future. Leaders can act as mentors and coaches for their employees, as captured in the transformational leadership dimension of individualized consideration (Bass, 1985). Where the development of an employee's personal future is instrumental for organizational outcomes, leaders can communicate an exciting vision of an individual's future. In my example above, the postgraduate research student's supervisor will have a key interest in the student's proactive career behaviour. The student's proactive career behaviours and eventually her career success are beneficial for both the research institution's and the supervisor's reputation. The supervisor can directly influence the student's image of her possible future by verbalizing possible future scenarios; but also by providing a role-model, and by expressing high expectations and confidence in the student's abilities and potential (Lord et al., 1999).

Third, the relational FWS involves improved role-relationships, e.g. being respected by supervisors or colleagues (Lord et al., 1999). Leaders' mentoring activities and their expression of confidence can also affect employees' relational future selves. Leaders can draw a picture of how they might see employees in the future and provide anticipatory reflected appraisal. Apart from their direct influence on employees' relational self, the

characteristics of the leader can influence the extent to which the supervisor-subordinate relationship is part of individuals' salient self-concept. Employees will define their self in terms of their leader-follower relationship when they identify with the leader (Kark & Shamir, 2002). This personal identification is mainly based on the leader's personal attributes, and is one of the mechanisms through which transformational or charismatic leaders influence their followers. Employees with low self-concept clarity are more likely to define themselves in terms of their relationship with the leader and gain a sense of self-direction from this relationship (Howell & Shamir, 2005). An employee who does not have a clear and consistent self-concept that can guide her behaviour when facing weak situations (Mischel, 1973) can be guided by how she hopes her leader will see her in the future and set proactive goals that will improve her future role-relationship.

In summary, leaders can create the conditions that enhance FWS at each level of the self-concept. These conditions provide an indirect mechanism for increasing proactivity by supporting the motivational basis of proactivity while allowing for autonomy and independence.

2.5 Summary of the proposed model and overview over the thesis

Future work selves on different levels can promote the setting of proactive goals to influence one's own future, the future of one's role-relationships, and the future of the collective one identifies with. A FWS assists in generating the discrepancy needed for the setting of change-oriented goals; it provides the future orientation that enables individuals to put up with currently unsatisfying conditions for the benefit of a better future; it captures the future self-definition that gives meaning to self-set goals; and its hoped for characteristic adds value to the goals that may not be sufficiently supported by external rewards and that may face resistance and set-backs. Future work selves provide a mechanism through which contextual factors such as leadership can influence employee proactive behaviour.

In this thesis I focus specifically on personal FWS. As elaborated above, personal FWS are hoped for images of the personal self at work in the

future that is different to the current self. They are based on the personal identity of an individual, and can motivate the setting and striving for proactive goals intended to enhance one's career and personal development.

A variety of FWS characteristics that are likely to influence their impact on the setting and pursuit of proactive goals and thus on proactive behaviour have been introduced. Figure 2 provides a summary.

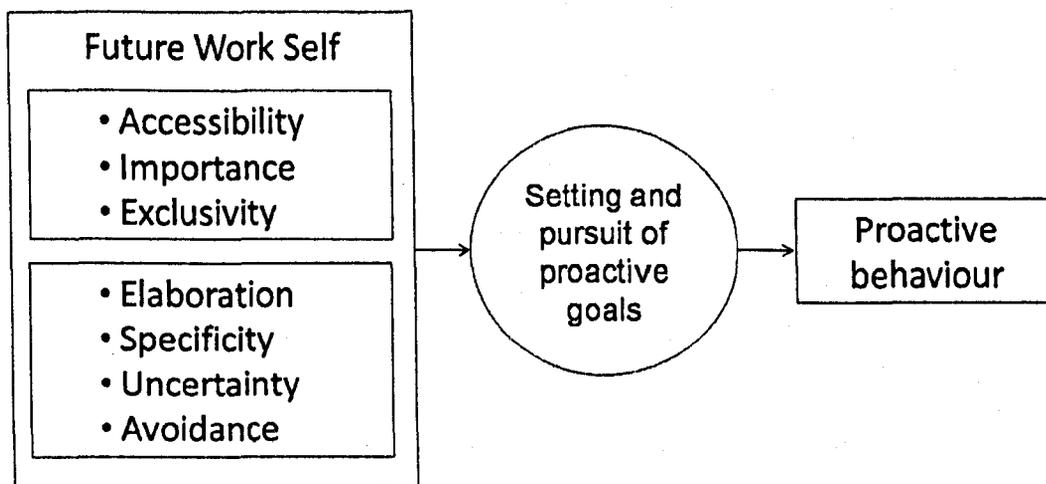


Figure 2. Proposed model

Accessibility, importance and exclusivity of the FWS refer to its characteristics as perceived by the individual, while elaboration, specificity, uncertainty and the presence of avoidance reflect characteristics of the FWS narrative. Throughout this thesis I will address each of these characteristics and explore their relationship with proactive goals, or proactive behaviour, respectively.

In the next chapter, I first describe my methodological approach to the assessment of future selves underlying the empirical part of this thesis. I then define the context of the present research and argue why the chosen sample provides a fruitful context for the study of the concepts in question, and discuss the advantages and disadvantages of the chosen data collection technique.

3 Chapter 3 – Methodology

3.1 Introduction

Future selves have been proposed to influence individuals' motivation in two ways: they first provide a goal to strive for, and then “energize” the individual to pursue actions necessary for attaining a future self (e.g., Markus & Ruvolo, 1989). In other words, they provide a higher-level goal from which meaningful sub-goals (personal goals/projects or actions) can be derived, and they facilitate the striving for these goals. The simulated desired state that a future self provides is proposed to lead to activate plans and strategies to bring it about, to produce positive affect and arousal and facilitate selective information processing (Markus & Ruvolo, 1989)

In the previous chapter, I have explored how future selves can serve as a source of proactive goals and can facilitate the pursuit of proactive goals. In this chapter, I discuss the different approaches of assessing future selves and their characteristics and outline my own methodological approach. The methodology of this thesis and the methods of data analysis are then discussed in detail in the respective chapters (Chapters 4, 5, 6, and 7).

3.2 Measuring future selves

Three general approaches to the assessment of future selves can be identified (Oyserman & Fryberg, 2006). Future selves have been measured with close-ended or open-ended formats. A number of domain-specific close-ended measures of future selves have also been introduced.

As discussed in 2.1.4, the methodological choice in assessing future selves reflects different conceptualisations of the future self as identity. In research adapting close-ended measures participants are asked to choose from lists of adjectives the ones they consider possible for their future selves. Studies employing open-ended measures either prompt participants to freely provide adjectives or short descriptions of what they hope or fear their future to be like, or to provide written or oral narratives of their future selves. Below, I

review these different approaches before discussing their underlying assumptions.

3.2.1 Closed-ended measures

Markus and Nurius (1986) developed a questionnaire that listed 150 possible selves, which consisted of general descriptors typically found in self-concept inventories (e.g., creative, intelligent), physical descriptors (e.g., good-looking, athletic), life style possibilities (e.g., having an active social life, being health-conscious), general abilities (e.g., able to influence people, knowledgeable about art), occupational possibilities (e.g., a business owner, a media personality), and possibilities tied to the reflected self (e.g., being loved, being appreciated). Participants indicated whether each item described them now, whether it had described them in the past, whether they thought it would ever describe them, how probable it was to them, and how much they would like the item to become reality. This measure was subsequently used in multiple studies (e.g., Dunkel, 2000; Knox et al., 1998; Leonardi et al., 1998; Penland et al., 2000). Kerpelman, Shoffner and Ross-Griffin (2002) used 41 items of the possible selves questionnaire in the development of the possible selves Q-sort.

Norman and Aron (2003) asked participants to choose the future self they most hoped (or feared, respectively) to become from a list of 20 previously identified most common future selves. Among the most commonly mentioned hoped for selves were "successful", "loving", "a parent", "happy", "attractive", "calm", and "financially secure". Most commonly mentioned feared selves were, for example, "ordinary", "inferior", "unemployed", and "a drug/alcohol addict". The availability and accessibility of the most and least important future self was assessed following the procedure adopted from Ruvolo and Markus (1992). Availability was assessed via the amount of detail in participants' descriptions of their future selves as rated by two coders. Accessibility was assessed with a reaction-time task; the mean reaction time to features related to the most and least important future self was used as a measure of accessibility. Participants also responded to six items assessing the perceived control over their chosen future selves, and a four item measure of

their motivation to attain their hoped for future self, or avoid their feared future self, respectively.

More context-specific measures of future selves were also employed in past research. Quinlan, Jaccard and Blanton (2006) asked participants to rate the probability that attributes associated with binge drinkers would characterize them 2 years after college. Anderman, Anderman and Griesinger (1999) asked student participants to indicate how well each of a number of statements described them now, and how well it would describe them in the future. Items assessed the domain of the 'academic self' (e.g., "good student", "smartest in class", "better than other students") and the 'social self' (e.g., "popular", "chosen first for teams and groups", "have a lot of friends") (p. 8). Similarly, Kemmelmeier and Oyserman (2001) asked participants to rate the likelihood that three specific academic selves ("doing well in school", "getting good grades", "understanding class material", p. 138) would describe them in the coming year. Freeman, Hennessy, and Marzullo (2001) asked participants to visualize themselves at a number of future time periods (from "one month" to "20 years") and at specific events ("graduate from college", "when you get married") and to rate the likelihood that they will be smoking at each of these time points to assess the degree to which smoking was part of their possible selves.

3.2.2 Open-ended measures

Oyserman and colleagues (Oyserman et al., 2006; Oyserman et al., 2004; Oyserman & Fryberg, 2006; Oyserman et al., 1995; Oyserman & Markus, 1990; Oyserman & Saltz, 1993; Oyserman et al., 2002) used an open-ended measure assessing the future selves students held for the next year. Participants were asked to list three expected²⁵, and three feared selves for the next year, and goals they were currently pursuing to bring these selves about or, in the case of feared future selves prevent them. Typical expected selves include "getting along in school", "having friends", or "having a job".

²⁵ Originally, Oyserman also distinguished between hoped for and expected future selves (Oyserman & Markus, 1990).

Examples for frequent feared selves include “being a criminal” and “being a drug addict”. In addition, coders rated the degree to which future selves were balanced, i.e., described feared and hoped for aspects of the same domain. Feared future selves are proposed to provide for persistence in the pursuit of corresponding hoped for future selves. Balanced future selves have been shown to have a stronger influence on behaviour (Aloise-Young et al., 2001; Oyserman & Fryberg, 2006; Oyserman & Markus, 1990; c.f., Oyserman & Saltz, 1993). This measure has been widely used since (e.g., Carver et al., 1994). In Yowell’s (2000) study, the same measure was used as part of an open-ended interview protocol rather than a paper-and-pencil measure. Packard and Nguyen (2003) also used semi-structured interviews to tap into adolescent girls’ career-related possible selves by inquiring about their career plans.

Cross and Markus (1991) first provided participants with an explanation of the concepts of possible selves. Participants were then asked to list hoped-for and feared possible selves they currently imagined for themselves on two sets of lines, and to indicate the most important and the second most important self from each list. Participants provided between 7.6 and 5.7 hoped for possible selves, and between 5.1 and 3.1 feared selves, depending on their age. Resulting possible selves differed in their specificity from simple mentions of “being happy” to more complex statements such as “living in this house for the rest of my life, enjoying gardening and the birds that visit my feeders and shrubs” (p. 237). The same approach was adopted, for example, by Black, Stein and Loveland-Cherry (2001), Cameron (1999), and Knox, Funk, Elliott, and Bush (1998). The Possible Selves Interview (Hooker, 1992; see also, e.g., Hooker et al., 1996; Vignoles et al., 2008; Waid & Frazier, 2003) was also modelled after Cross and Markus’ measure.

Structured surveys and interviews are the dominant methods of assessing future selves. Packard and Conway (2006) review 141 studies on future selves, out of which 64% used structured surveys and interviews. Research employing these methods has frequently focused on the variety and complexity of the possible selves that an individual possesses: on the range of future selves, their categories, and the relationship between hoped for and (corresponding) feared future selves.

27% of the studies in Packard and Conway's review²⁶ however employed a narrative approach, which appears to imply a focus on the characteristics of one single future self rather than the composition of a set of future selves, and, as Packard and Conway argue, to reflect a view of the self as a narrative or story (e.g., Bruner, 1990; McAdams, 1996, 2001; see also Singer, 2004) rather than a collection of schemas (Markus & Wurf, 1987).

Ruvolo and Markus (1992) argued that free response methods are more successful in tapping aspects of future selves and asked participants to describe their visions of their ideal or most feared future.

Krieshok and colleagues (1999) developed a career intervention in which participants told a realistic, but idealistic story about their future. Lips (2000) asked participants to describe their future self in three powerful positions (as CEO or president of a large company, as a political leader, and as the director of an important research institute), and to rate the positivity and likelihood of becoming what they had imagined. Gonzales, Burgess, and Mobilio's (2001) participants were asked to write descriptions of their plans for the future, the quality of which was then analysed for comprehensiveness. Similarly, Gibbons and colleagues (1993) used written stories about participants' possible selves for cross-cultural comparisons.

King and colleagues (L. A. King, Hicks, Krull, & Del Gaiso, 2006; L. A. King & Raspin, 2004; L. A. King & Smith, 2004) instructed participants to write a description of their imagined future. These narratives were then independently rated by two trained raters in terms of their elaboration, vividness, detail and emotionality. These ratings were aggregated to create a composite score of elaboration. In addition, participants were asked to complete a three item measure of the salience of the future self they had described.

Similarly, Leonardi, Syngollitou, and Kisseoglou (1998) asked participants to write a small essay of how they saw themselves in a future

²⁶ Packard and Conway (2006) also identify visual methods and (psycho)drama methods as methods through which future selves or possible selves have been researched. However, these methods have scarcely been used and are frequently only employed in addition to survey and interview methods (e.g., Gibbons et al., 1993).

situation of success or failure. Narratives were coded into 7 categories, following an exploratory content analysis. Categories were, for example, “general, vague, stereotypical images of positive possible selves” or “clear, specific positive possible selves”.

Hoyle and Sherrill (2006) manipulated the activation of hoped for and feared health-related possible selves by providing participants with a list of words (e.g., “healthy”, “independent”, “well” versus “unhealthy”, “dependent”, “ill”) to be included in a written self-description.

Segal and colleagues (Segal et al., 2001) use the Anticipated Life History measure to prompt participants to describe “realistically the ‘future course of their life’ in a freely written narrative” (p. 60).

Above, I have reviewed commonly used close-ended and open-ended measures and made a distinction between open-ended measures prompting participants to list a number of future selves, and open-ended measures taking a narrative approach. The implications of this methodological choice are discussed next.

3.2.3 Implications of different methodological choices

As mentioned in 2.1.4, future selves have been approached from two different theoretical perspectives. Following the conception of the dynamic self-concept by Markus and Wurf (1987) as a constantly changing combination of core self-schemas and self-schemas activated by the context a substantial body of research has focused on capturing the variety and composition of the future selves participants hold. Each self-schema or identity in the self-concept has specific cognitive, affective and behavioural consequences. Some identities that include core aspects of the self are chronically accessible and highly stable, while others are activated by situational cues. It is the activated or salient part of one’s self-identity, i.e. the working self-concept that influences self-regulation, and thus guides affect, information processing and behaviour (see Figure 3).

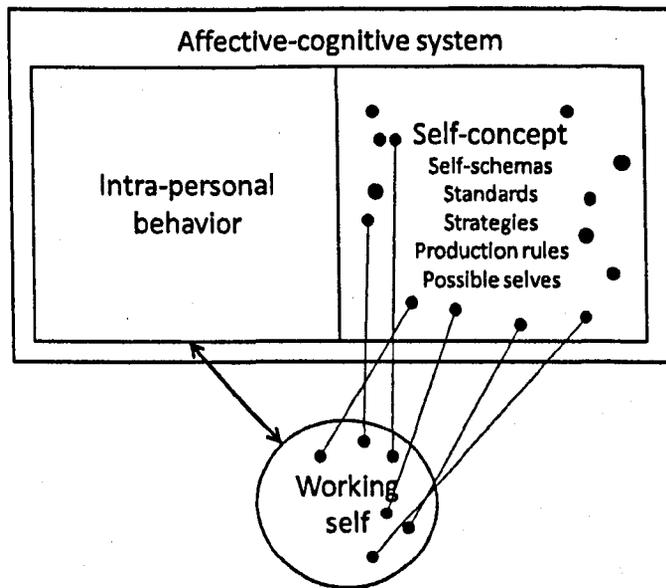


Figure 3. The dynamic self-concept (after Markus & Wurf, 1987, p. 315)

Research conceptualizing the self as narrative on the other hand draws on the same assumptions but has focused on the self as story (McAdams, 1996, 2001). The self is viewed as an “unfinished narrative project” (Packard & Conway, 2006, p. 253), which, like other identities, is negotiated in social interactions (Goffman, 1959) and constructed through sense-making processes (Weick, 1995).

As briefly discussed above, these approaches also differ in what is considered a single future self. Examples for future selves collected with open-ended measures asking participants to list their future-oriented identities include “to be happy”, “being a lawyer” (Cross & Markus, 1991, p. 237), “successful”, “loving” (Norman & Aron, 2003, p. 502), “have a car” or “do well in school” (Oyserman & Markus, 1990, p. 115). Each of these statements is considered a future self that can be more or less accessible in the working memory, be more or less valued by the individual and may potentially be contrasted with a corresponding feared future self of being unhappy, not doing well in school etc. Close-ended measures that aim to detect the presence of predetermined future selves in individuals’ self-concept use similar statements, such as “make own decisions” (Markus & Nurius, 1986, p. 959), or “do better than other students” (Anderman et al., 1999, p. 7). In contrast, an example of a future self collected by King and Smith (L. A. King & Smith, 2004) using a narrative approach is shown below:

"My partner and I will have bought our own home. . . . We will have at least one child. Our household is as big and noisy as I'd always dreamed. We have a lot of friends and our parents visit us often (as they do now). My partner's nieces come to visit us and know who we are and call us both "Aunt", love to come here and hang out, talking, watching soaps, and playing games. We always have animals around – dogs and cats. We live in an urban setting instead of a smaller town, but we have a great neighborhood with lots of different types of people." (L. A. King & Smith, 2004, p. 208)

Future self narratives such as the above may contain what in other research is conceptualized as a single future self (e.g., the scenario above may be seen as containing the future self of "being an aunt").

I see a further important distinction between close-ended measures and open-ended measures that ask participants to list their future selves on one hand, and narrative methods on the other hand, in the type of future-oriented thinking they encourage and capture. Decisions about the future can either be based on a semantic mode of future thinking, or a more episodic pre-experience of future events from a personal perspective (Atance & O'Neill, 2001; Suddendorf & Corballis, 2007)²⁷. Episodic prospection or 'episodic future thinking' refers to "a projection of the self into the future to pre-experience an event" (Atance & O'Neill, 2001, p. 533). It is based on episodic memory (Suddendorf & Corballis, 2007), which provides access to the personal experience of an event, rather than abstract knowledge about it. Semantic prospection on the other hand relies on abstract rules rather than on imagined individual events (Suddendorf & Corballis, 2007). Semantic prospection may be largely enabled by semantic memory (Suddendorf & Corballis, 2007). Semantic memory which contains general knowledge,

²⁷ In the context of future-oriented judgement, individuals tend to be overly optimistic when estimating the completion date for a specific project. This phenomenon is referred to as the "planning fallacy" (e.g., Buehler & Griffin, 2003; Buehler, Griffin, & Ross, 1994). Atance and O'Neill (2001) suggest that episodic future thinking may increase the accuracy of such predictions, for example, by making individuals more aware of situational constraints. Others argue that accurate predictions of future outcomes depend on a combination of episodic and semantic memory (e.g., Anderson & Schooler, 1991).

provides the basis for analogical and inferential reasoning, and involves only noetic consciousness, “consciousness of knowledge without a sense of self and experience accompanying it” (Moscovitch et al., 2005, p. 39). Episodic future-oriented thinking on the other hand involves auto-noetic or self-knowing consciousness (Tulving, 1985).

I argue that it is more likely for close-ended and structured approaches to elicit semantic prospection. Being asked to list what characteristics one would like to possess in the future does not necessarily require an episodic simulation of the future one would like to experience from which these characteristics can then be extracted. It is more likely that individuals will rely on their more abstract knowledge about what they value and would likely to become. In contrast, writing a narrative on one’s future self is more likely to require episodic prospection.

3.2.4 The chosen methodological approach

In this thesis, I opted for a narrative approach to assess future work selves. This methodological choice is not about the more accurate representation of the true nature of the phenomenon of a future self. Individuals are most likely capable of both semantic and episodic thinking in relation to their future self. Predictions about the future are likely to be based on an interplay of semantic and episodic prospection (Suddendorf & Corballis, 2007), mirroring the interaction of semantic and episodic memory (Tulving, 2005). A core part of the theoretical argument I develop in Chapter 2 however is the usefulness of the future work self as a basis for mental simulation that can facilitate the setting of proactive sub-goals. The future work self as I conceptualize it reflects episodic rather than semantic future-oriented thinking. A narrative approach is likely to be more successful at both eliciting and capturing the episodic thinking associated with a future work self. The construction of a future work self narrative is more likely to involve the creation of visual imagery. The act of imagining future events can make them seem more likely (e.g., Gregory, Cialdini, & Carpenter, 1982), and can help to bring them about (see Johnson & Sherman, 1990; or Koehler, 1991, for reviews). As Hoyle and Sherrill put it, future selves “provide individuals with

an image of themselves engaged in behaviours relevant to those self-representations and, in so doing, render accessible more cues relevant to these behaviours” (2006, p. 1676).

Drawing on methodological approaches that focus on both the elaboration and the accessibility of a FWS narrative in an individual’s memory (e.g., L. A. King & Raspin, 2004), I have above argued that a narrative approach does not exclude a conceptualisation of the self-concept as composed of identity elements of varying accessibility. Similar to other researchers (Ibarra, 1999) I intend to in this thesis draw on Markus and Wurf’s (1987) conceptualisation of the self-concept while exploring individuals’ identity narratives. Elements of a future self may be more or less accessible in an individuals’ working memory which may influence their inclusion into the (socially) constructed future self narrative. Frequent activation of a future self in the working memory may lead to individuals spending more time on the construction and elaboration of a future self story.

From an economical perspective, structured survey- and interview methods aimed at generating a list of possible selves may be more efficient at collecting future selves from a large number of participants (Packard & Conway, 2006). However, as a consequence of the theoretical considerations outlined above, I decided to employ a narrative approach. While a narrative approach is more likely to elicit and capture episodic prospection and mental simulation, this approach may however also limit the generalizability of findings. Writing narrative descriptions of one’s FWS may be more appealing to participants who are creative and comfortable with producing text.

The methodological approach is described in detail in Chapter 5. In two pilot studies I developed the materials I used to collect participants’ future work self narratives. I developed coding instructions that allowed two independent coders to reliably rate the characteristics of the future work self narratives (their elaboration, specificity, and uncertainty).

I combined this approach with rating scales assessing participants’ perceptions of the characteristics of their future work self. As I have outlined in Chapter 2, self-rated characteristics of a future self and the characteristics of the future self narrative are considered to be independent aspects of future

selves (L. A. King & Hicks, 2004, 2007; L. A. King & Smith, 2004). The development and measurement characteristics of the scales I used to assess the self-rated characteristics of a future work self (its accessibility in the working memory, its exclusivity, i.e., its dominance over other competing future selves, and its importance, i.e., the individual's motivation to attain it) is described in detail in Chapter 4. In Chapter 5, I explore the relationship between these self-rated characteristics and the characteristics of the future work self narrative.

Below I discuss the context and method of the data collection employed in this dissertation.

3.3 Context of the research – Postgraduate research students

I conducted two web-based surveys among the postgraduate research (PGR) students at a large research-intensive university in the North of England. I opted for the context of research students as a fruitful area for the study of proactivity and the future work self for two reasons.

First, postgraduate research students are facing an impending career transition, the success of which strongly depends on their proactive behaviour. In developing their skills and networks, and gaining the experiences needed in their future employments, postgraduate research students lay the groundwork for their subsequent employability in a highly competitive labour market. Governments as well as private sector organizations see postsecondary education as a strategic tool to ensure competitiveness in knowledge-based societies relying on innovation (Craswell, 2007; McAlpine & Norton, 2006). However, there is ongoing debate about the employability of doctoral graduates (R. Gilbert, Balatti, Turner, & Whitehouse, 2004; McAlpine & Norton, 2006). The call for wider employment-related skills (e.g., Borthwick & Wissler, 2003; Roberts, 2002) has led to initiatives to improve doctoral graduates' employability in the UK (e.g., United Kingdom Research Councils and the Arts and Humanities Research Board, 2001; Vitae, formerly the UK GRAD programme), in Australia (e.g., Council of Australian Deans and Directors of Graduate Studies, 2005), in Canada (e.g., Evers, Power, & Mitchell, 2003), and in the US (e.g., Gaff, Pruitt-Logan, Sims, & Denecke,

2003). Yet, the responsibility for the acquisition of skills and resources that will ensure future employability still largely lies with the student (Craswell, 2007; Metcalfe & Gray, 2005). Skill development initiatives rely on the individual student to identify and address skill gaps. Postgraduate research students are required to be proactive. Ideally, the outcome of a research degree is not only a finished dissertation, but a broad array of research- and possibly teaching skills required to become a successful member of the scientific community. Postgraduate research students thus need to be oriented towards the future. As argued above, they are required to develop skills that will not so much be required in order to graduate, but to be successful long after they have been awarded their PhD. They need to build professional and social networks they will look to for support over years to come. They are explicitly required to be self-started, not only in their research but also in their career development. Much of what postgraduate research students do is not directly related to finishing their PhD, but directed towards a meaningful future impact on themselves or their environment. In highly pressured situations dominated by an institutional focus on timely completion however, graduate students are forced to prioritize the use of scarce resources. The key role proactive behaviour plays in ensuring postgraduate research students' employability makes this group a worthwhile sample for the study of proactivity.

The second reason why I chose this sample is that postgraduate research students are a prototypical example of today's knowledge workers, typically being more committed to their field of research and their community of peers than to a specific organization (Keller, 1997), in this case their university or department. As mentioned above, postgraduate research students face a more or less impending career transition. In such periods of uncertainty, future work selves are likely to be especially important. Periods of career transition are increasing as careers become more and more 'boundaryless' (Arthur & Rousseau, 1996). Due to the changing nature of work (e.g., Cascio, 1995), individuals increasingly move between firms rather than remain in stable jobs (Pfeffer & Baron, 1988). Thus, research students have the potential to provide a rich source of insight about the behaviour of knowledge workers in a variety of careers (Page, 1998).

3.3.1 Postgraduate research students in the present sample

In the United Kingdom, the traditional doctorate is examined by research and normally requires at least three years of full-time activity. Successful completion usually requires “the completion of a piece of original research which creates new knowledge” (Sastry, 2004, p. 8). While there are exemptions, doctoral programmes at British universities traditionally include little or no coursework (Holdaway, 1993).

The university I conducted my research at has the sixth-largest postgraduate research student numbers in the whole of the UK (Higher Education Statistics Agency, 2002-2003). The number of postgraduate research students registered at the university in the academic year in which I conducted my research was 2120, out of which 1671 were full-time, and 503 part-time students. No separate records are kept for research students and other postgraduate students in terms of their age and gender. Out of the total of the postgraduate student population, 51% of were female, and 54% were between 21 and 24 years old, 41% between 25 and 39. These numbers were obtained from the university’s Corporate Planning Office.

3.4 Mode of data collection

3.4.1 Electronic survey techniques and web-based surveys

(Self-administered) surveys are the most widely used form of data collection in organizational studies (Kraut, 1996). With more and more people linked to the internet, electronic survey techniques have become a popular means of data collection in organizations (e.g., Sproull, 1986; Stanton, 1998). Despite this development, research on electronic survey techniques has been dispersed over different disciplines and has not been systematically evaluated (Simsek & Veiga, 2000). Scholars point to the need for further research on the benefit and obstacles of web-based data collection (e.g., Gosling, Vazire, Srivastava, & John, 2004). Below, I briefly review the main advantages and disadvantages of electronic survey techniques before discussing the approach I have opted for in this thesis (see e.g., Gosling et al., 2004; Simsek & Veiga,

2000, 2001; Stanton, 1998; Stanton & Rogelberg, 2001, for a more in-depth discussion of electronic survey techniques).

3.4.1.1 Advantages and disadvantages of electronic survey techniques

As Thompson and Surface put it, “the advantages of Web-based questionnaires are many and well-documented” (2007, p. 242). The main advantages over traditional paper-and-pencil surveys are the lower costs involved (Dillman, 2000; Schmidt, 1998), the possibility of very rapid data collection (Mehta & Sivadas, 1995; Sproull, 1986), and a potentially greater richness of the medium through the implementation of different types of cues and personal contact (via email) (Simsek & Veiga, 2001). Electronic survey techniques do however also have disadvantages which mainly centre around sampling issues and non-sampling errors.

Sampling issues. Simsek and Veiga (2001) identify representativeness of the sample, sampling frame and sampling control as the most important issues in administering electronic surveys. As I will elaborate below, email surveys face different issues from web-based surveys. While email surveys provide sampling control, participant anonymity is usually compromised.

Particularly in research aiming to sample the general population, sampling representativeness is a major concern (Stanton, 1998). At least in the last decade, computer usage was still mainly restricted to a young, well-educated demographic with above-average income (Couper & Rowe, 1996; Oppermann, 1995). Gosling and colleagues (Gosling et al., 2004) on the other hand find that web-based samples are in fact more diverse than traditional paper-and-pencil samples, but are however not completely representative of the population.

The sampling frame is “a master listing of population members usually used to draw a random sample from which data will be collected” (Simsek & Veiga, 2000, p. 96). This list will ideally contain every single member of the chosen population (but only once), and the quality of this list determines sampling biases. Clearly, issues of sampling frames are less likely to be problematic when the survey only involves a single organization (Simsek & Veiga, 2001). The sampling frame links into issues of sampling control.

Sampling control is desirable for understanding the size of the obtained sample in relation to the population and the sampling pool, and to exclude multiple responses from single participants and participants purposefully misrepresenting demographic characteristics (Simsek & Veiga, 2001).

Non-sampling errors. Apart from coverage error which has been discussed above, non-sampling errors include non-response- and measurement error (Lavrakas, 1996) which will be briefly described below.

Non-response error²⁸ occurs when some intended participants that form part of the target population do not respond to the survey. Non-responses can be the result of either failed attempts to reach respective participants, or participant refusals. In research on electronic survey techniques relatively much attention has been given to response rates, particular in comparison with traditional paper-and-pencil surveys. Response rates for electronic surveys vary strongly between studies (Sax, Gilmartin, & Bryant, 2003; Simsek & Veiga, 2000). Response rates reported range from 7% to 76% for web-based surveys (Simsek & Veiga, 2001) and from 19.3% to 76% for email surveys (Simsek & Veiga, 2000). In general, web-based surveys often attain lower response rates than paper surveys (S. D. Crawford, Couper, & Lamias, 2001). For example, Sax and colleagues (2003) found a response rate of 22% for paper-and-pencil survey among college students, and a response rate of 19.8% for the web-based version of the survey. Sheehan (2006) suggests on the basis of a meta-analysis of 31 studies over 14 years that the number of studies employing electronic surveys has increased while the average response rates seem to have decreased.

As a result of concerns about low response rates, research has focused on means of enhancing the response rate in electronic surveys. For example, Sax and colleagues (2003) find that somewhat counter-intuitively providing a response incentive for the web-survey resulted in a lower response rate (17.7% versus 19.8% without incentive). In their 2000 meta-analysis, Cook and colleagues (Cook, Heath, & Thompson, 2000) identify pre-contacts, the total number of contacts, and personalized contacts as factors associated with high

²⁸ As mentioned above, sampling control is required to accurately estimate response rates in electronic surveys.

response rates in studies employing web-based surveys. Crawford and colleagues (S. D. Crawford et al., 2001) similarly found that frequent reminders increase response rates, and point toward the importance of participants' perception of burden for their willingness to take part in web-based surveys.

The population sampled may be the most important factor in determining response rates as Sax and colleagues point out (Sax et al., 2003). They note that, for example, the majority of studies among college students show a higher response rate for paper-and-pencil surveys than web surveys. Low response rates are particularly common in student samples (Kaplowitz, Hadlock, & Levine, 2004; Porter & Whitcomb, 2003). In their meta-analysis, Cook, Heath, and Thompson (2000) find a strong negative effect of academic settings on the response rate in web surveys²⁹.

Regarding (systematic) measurement error in electronic surveys, some researchers have argued that electronic survey techniques convey less social information and as a result may be associated with lower evaluation anxiety (Kiesler & Sproull, 1986; Sproull, 1986). This can enhance the quality of the data obtained. In a meta-analysis of 39 studies, Weisband and Kiesler (1996) found computer administration of surveys associated with higher self-disclosure compared to face-to-face administrations. Schaefer and Dillman (1998) report greater item completion and longer responses to open-ended questions for email surveys. In sum, there is some evidence for a higher quality of data being obtained through electronic survey techniques. It is however possible, that these effects are due to the relative novelty of computerized data collection at the time, which may result in participants taking greater care when filling out the survey, as Corman (1990) suggests. More recently, Gosling and colleagues (2004) conclude on the question of cross-method replicability that overall findings obtained in web samples are consistent with those obtained using traditional methods.

²⁹ Cook et al. (2000) note however that academic setting may have been a suppressor variable in their study.

3.4.1.2 Web-based surveys versus email survey technique

The two most widely used data collection techniques employing computers and telecommunication networks are email surveys and web-based surveys³⁰. *Email survey technique* refers to “a computerized self-administered questionnaire in which the researcher sends a questionnaire and the respondents receive, complete, and return the questionnaire through e-mail systems” (Simsek & Veiga, 2000, p. 95). When email surveys are used, anonymity is compromised as respondents return questionnaires using the reply function of their email package and thus reveal their email address (and possibly their name) to the researcher (Simsek & Veiga, 2001). In contrast a *web-based survey* is a “computerized, self-administered questionnaire in which the researcher announces the survey on a World Wide Web site where individuals access and complete the questionnaire by using compatible Web browsers” (Simsek & Veiga, 2001, p. 219). Respondents can be directed to this web site through links on other sites or invited to the site through emails with URL-embedded links. Web-based surveys do however not have the same sampling controllability as email surveys (Stanton, 1998) as anyone with internet access could potentially respond to the survey (Simsek & Veiga, 2000).

3.4.2 Web-based surveys in the present sample

In the studies that form part of this thesis I opted for a web-based survey approach. Email and internet form an important part of postgraduate research students' daily life. Thus, computer- and internet access which may limit the generalizability of results in other samples as elaborated above are not a concern in the present studies³¹. In addition, university email addresses provide a cost-effective and efficient way of contacting postgraduate research students. As mentioned above, doctoral programmes in the UK involve very

³⁰ See e.g. Aaker, Kumar and Day (1995) for an overview over different forms of data collection utilizing communication technology.

³¹ I can however not exclude differences in the quality of the internet connection. Full-time students who are working in an office within the university may have a faster internet connection than part-time students who may be accessing the survey from home via a modem.

little coursework (Holdaway, 1993) and do not require students to be present throughout the academic year. Students may thus be difficult to reach via mail as they may not be living locally for at least part of the year. Thus, I chose to invite postgraduate research students via email to participate in the two web-based surveys this thesis is based on.

I chose web-based surveys over email surveys; because of the nature of the studies anonymity of participants was a higher priority than control over the sample. Study participants reported on potentially delicate issues such as their supervisor's behaviour, and their own anticipated completion time. Similarly, supervisors involved in the study were asked to rate the performance of their students which at least partially reflects their own performance as a supervisor. Ensuring the anonymity of participants was likely to result in less socially biased responses than could have been achieved by the assurance of confidentiality alone. In addition, it was unlikely for the survey to be accessed by individuals other than the intended sample of postgraduate research students at the respective university. The URL-link to the survey was not published on a public website, but only included in the invitation emails sent to potential study participants. While study participants could have passed this link on to individuals that were not part of the intended sample, this is rather unlikely. However, to exclude this possibility, a number of control questions were included to ensure that respondents were part of the intended sample (e.g., "Are you at the University of [...]?").

While the chosen sample is a fruitful area for the study of future selves and proactivity as I have argued above, there are also drawbacks regarding response rates. Postgraduate research students in the target population are frequently targeted with web surveys which are used to collect data for student projects. Graduate students occasionally receive several emails per day inviting them to participate in web surveys. I employed a number of measures to increase response rates. First, the survey topic (i.e., "the experience of being a postgraduate research student") was framed to be highly salient to potential study participants. Higher salience of the research topic has been shown to be associated with higher response rates (Cook et al., 2000). Second, at the first time point of data collection (see below) participants received personalized

feedback on how they had rated themselves on a number of personality dimensions as an incentive.

Regarding the sampling frame, I contacted potential study participants via a centralized email distribution list managed by the University's computer- and information technology services. As a result, there was very little sampling control. The number of postgraduate research students actually contacted cannot be estimated. I based my calculation of response rates on the number of postgraduate research students registered at the University at the time of data collection. In assessing non-response I was however unable to distinguish between non-contacts and refusals. Non-response may influence the validity of the results, if respondents show different characteristics than non-respondent (Krosnick, 1999). To assess the representativeness I compared the sample obtained to the general population of postgraduate research students. This will be described in more detail in 4.3.1.

3.4.3 Two-wave longitudinal data collection

My initial intention was to obtain supervisor ratings of postgraduate students' behaviour and performance. Together with a web programmer, I developed a web-survey system that would enable me to match student- and supervisor data without compromising the anonymity of either. The web-survey students were invited to fill in generated a unique link at the last page of the survey, based on the initials of the supervisor entered by the student. The students were then asked to pass this link to the supervisor they mostly worked with. The link directed the supervisor to a short web-survey where they would rate their student's behaviour and answer questions about themselves. Any subsequent invitation to the survey by another student directed the supervisor to an even shorter version of the survey where they were only asked questions specific to the student who had sent them the link. I gained substantive institutional support for the study from the Graduate Research Office, the university body providing support to research students, and the University's Careers Service. The Director of Research of the Faculty of Social Sciences sent an email previous to the first study informing all of the university's academic staff about the study and asking for their compliance. Despite these

efforts the supervisors' response rate was very low. In the first study, 298 students reached the end of the web-survey and were given the unique link to pass on to their supervisors. I obtained supervisor ratings for only 35 students. It was impossible for me to detect whether students were not passing the link on to their supervisors, or whether supervisors were not responding. It is likely that students felt uncomfortable "bothering" their supervisor and asking them to invest time in a web-survey. After this disappointing outcome, I conducted another study targeting the same sample. In both studies, I asked participants to enter a code consisting of a combination of letters of their first name, and their mother's Maiden name, and the day of their date of birth. Based on this code, I identified 82 students who participated in both studies. Students' demographics served as an additional control to ensure data from the two studies were matched correctly. The final sample of 82 students for whom I obtained data at Time 1, and 6 months later at Time 2, served as the basis for longitudinal analyses described in Chapter 6 and Chapter 7. The characteristics of this sample and its representativeness are discussed in these chapters.

3.5 Summary

In this chapter I have first described my methodological approach to the assessment of future selves. I have then defined the context of the present research and have argued why postgraduate research students provide a fruitful sample for the study of the concepts in question. I have briefly reviewed the advantages and disadvantages of web-based data collection and have outlined the considerations underlying my choice of data collection technique. Finally, I have described the process through which the two-wave longitudinal data that forms the basis of the empirical part of this thesis was collected.

More detailed descriptions of the sample and the research methodology are provided in the respective chapters.

4 Chapter 4 – FWS and proactive career management

4.1 Introduction

In the empirical part of this thesis I focus on personal future work selves (FWS)³², hoped for images of the personal self at work in the future that is different to the current self. In this chapter I relate (personal) FWS to existing concepts of career identity and future orientation and explore their role in the motivation of career self-management behaviours.

In boundaryless careers, success depends on three career competencies – knowing why, knowing whom, and knowing how (Defillippi & Arthur, 1994). FWS relate to the competency of knowing why; that is, the beliefs and identities individuals hold in relation to their career. This competency is fundamentally about the meaning attached to one's career. Knowing why influences individuals' motivation because it “underlie[s] the overall energy and identification a person may bring to the tasks, project, and employment cultures that he/she faces” (Sullivan & Arthur, 2006, p. 25). Thus, knowing why prompts individuals to explore different career possibilities, and to adapt to changing work situations through career self-management (Arthur, Inkson, & Pringle, 1999).

The concept of “career identity” is central to understanding the role of personal identification and meaning in one's career (c.f. Eby, Butts, & Lockwood, 2003). Career identity is the degree of centrality one's career has for one's self. Career identity is a powerful predictor of career related behaviours because it directs one's effort towards a particular set of career goals (Bhagat & London, 1999). A career identity is inherently longitudinal and “involves making sense of one's past and present and giving direction to one's future” (Fugate, Kinicki, & Ashforth, 2004, p. 20). In its initial conceptualisation by London (London, 1983; London & Mone, 1987; London & Noe, 1997), career identity refers to the degree to which “one defines oneself

³² Unless stated otherwise, FWS mentioned below refer to personal FWS.

by work”, and consists of “job, organizational, and professional involvement” (London & Noe, 1997, p. 62).

Although career identity is important because it directs career motivation, most conceptualisations of career identity focus on identity in the present, such as identification with a current job or profession. Related concepts like work commitment (Dubin & Champoux, 1975) and career commitment (G. J. Blau, 1985, 1988) also emphasize an individual’s current experience of commitment. In the present chapter I propose a distinction between current and future-oriented career identities, i.e. future work selves (FWS).

FWS are likely to be especially important in periods of career transition and uncertainty. Such periods are increasing as careers become more ‘boundaryless’ (Arthur & Rousseau, 1996). Individuals increasingly move between firms rather than remain in stable jobs (Pfeffer & Baron, 1988). Employees need to maintain their career identity independent of their current work-context and to decouple their identity from their present job or organization (Weick & Berlinger, 1989). Thus, Mirvis & Hall (1994) argued that individuals need to be able to integrate their diverse work experiences and develop a coherent view of themselves in the light of rapidly changing work contexts. Especially in periods of career transitions, the ability to “harness one’s career identity as a guide when establishing goals and making decisions” may play a crucial role in identifying career opportunities (McArdle, Waters, Briscoe, & Hall, 2007, p. 249). I propose that a FWS provides an orienting self-image in times of uncertainty and career transitions – a source of a coherent self in a changing environment. As such it can be a powerful motivational resource for career self-management behaviours that will influence future career outcomes.

In this chapter, I aim to disentangle current and future career identities to explore the motivational effects of FWS on career self-management behaviours. Although FWS can be seen as part of a broad career identity concept (Ashforth & Fugate, 2001; Fugate et al., 2004), there has been little empirical research distinguishing between individuals’ present identification with their career (“who am I now”), and the image they hold of their potential

than to a specific organization (Keller, 1997), in this case their university or department, and provide a rich source of insight about the behaviour of knowledge workers in a variety of careers (Page, 1998). Postgraduate research students thus provide the opportunity of studying proactive career management in knowledge workers facing a career transition.

In the following sections, I propose that FWS are important for driving proactive career behaviours and feedback seeking. I identify core characteristics of FWS that influence their impact on these behaviours (see Figure 4). I also propose that FWS add value to our understanding over and above more general career concepts such as career identity, as well as more general future-focused concepts such as future orientation.

4.2 Personal future work selves: Possible selves defined by careers

As argued in Chapter 2, I propose the value of a future work self (FWS) concept that is derived from research on possible selves, or the cognitive representations of what individuals hope, expect, or fear to be in the future (Markus & Nurius, 1986). Importantly, because possible selves are part of the self-concept, they constitute “motivational resources that individuals can use in the control and direction of their own actions” (Oyserman & Markus, 1990, p. 122). In essence, possible selves provide a key link between the self-concept and motivation (Markus & Nurius, 1986). They provide a basis for understanding the content of goals that individuals choose to pursue. They function as incentives for future behaviour (Markus & Nurius, 1986) and as reference points in self-regulatory systems (Carver & Scheier, 1981, 1990).

FWS refer to hoped for possible selves in relation to one’s work life and can be a part of one’s career identity (Fugate et al., 2004). I focus in particular on hoped for future selves. They are maximal career goals, idealized images of what individuals hope to become. As ideal selves, they encourage thoughts about accomplishments and aspirations and lead to a greater openness to change (Lieberman et al., 1999).

Like broader career identities, FWS can be articulated in the form of narratives. Career identity narratives are stories individuals create to give

future (“who do I want to be”). I propose that, though closely related to an individual’s identification with their present career, the FWS has a unique influence on proactive career management. I argue that self-initiated, future-oriented career behaviours are motivated not only by how strongly individuals define themselves in terms of their current career, but also by their attachment to their imagined future work or career. Figure 4 provides a summary of the proposed relationships in this study.

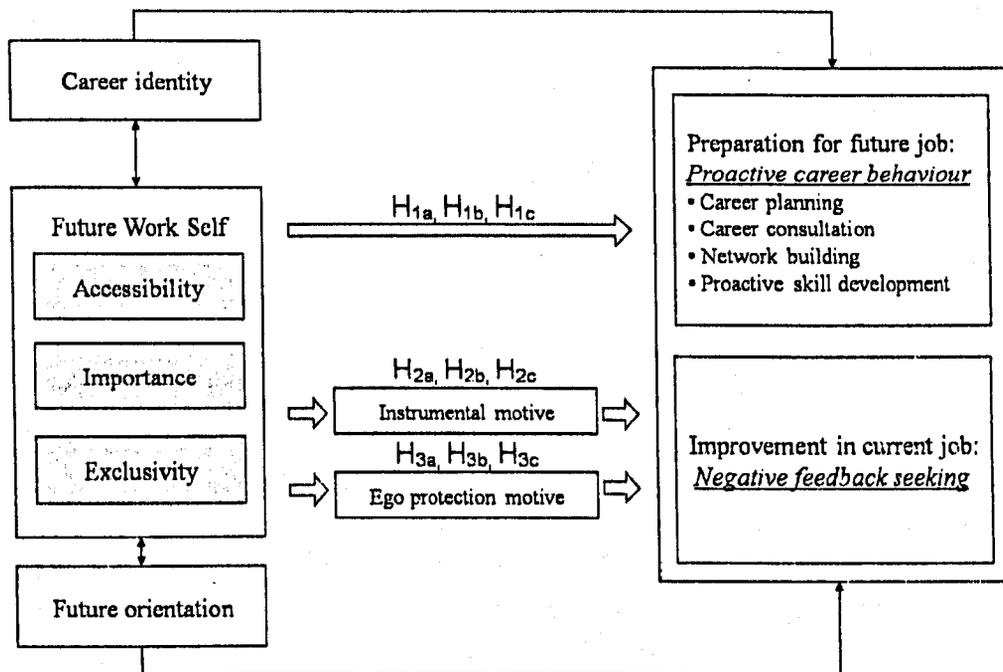


Figure 4. The Future Work Self and proactive career behaviour and feedback seeking

In this thesis, I focus on the FWS of postgraduate research students. As elaborated in 3.3, I chose this context for my study for two reasons. First, postgraduate research students are facing an impending career transition, the success of which strongly depends on their proactive career management. In developing their skills and networks and gaining the experiences needed in their future employments, postgraduate research students lay the groundwork for their subsequent employability in a highly competitive labour market. However, preparing for future jobs can also be time consuming and effortful and can involve image- and ego risks, so it is important to identify ways to motivate these behaviours amongst these students. Second, postgraduate research students are a prototypical example of today’s knowledge workers, being more committed to their field of research and their community of peers

meaning to their past, present and future career-related experiences (Ashforth & Fugate, 2001; Grotevant, 1987). They “lay the groundwork for future career moves” (Fugate et al., 2004, p. 20). In the case of FWS, they are an imagined, hoped for, future career identity that captures individuals’ hopes and aspirations. An example of a FWS expressed through a narrative is shown below:

“My future work self is a well-known and respected member of an academic department that has performed research and done things that push boundaries. I imagine myself to be responsible for a variety of teaching options, and would like to think that I would be approachable by students that see me as a good source of information and advice whilst respecting me for my achievements. I would like to be involved in numerous projects and have my work widely referred to by both students and academics, whilst being happy in my personal life and feeling like I have achieved something in my life and helped to change the status quo for the better”.

Postgraduate Law student

Before discussing how FWS can influence proactive career behaviours and feedback seeking, I briefly define these behaviours and outline their relevance.

4.2.1 Proactively preparing for future jobs and improving current performance: Proactive career behaviours and feedback seeking

In the literature on proactive career behaviours, scholars have focused on a range of specific behaviours through which individuals aim to shape their career. The importance of such self-directed, future-oriented career behaviours has increasingly been recognized (Seibert et al., 2001; Tharenou & Terry, 1998). Although historically career management and development were considered to be the employers’ responsibility, the changing nature of employment has led to a shift in responsibility from employers to employees (Hall & Mirvis, 1995). It is no longer enough for individuals to simply react to situations, or to wait for others to direct them. In boundaryless careers in

particular, individuals need to continuously be proactive (Jackson, 1996), and engage in behaviours that are directed towards a future impact (Grant & Ashford, 2008). They need to actively manage their future careers through exploring options, setting goals, developing skills and abilities, and accumulating experiences that will ensure their future employability (Claes & Ruiz-Quintanilla, 1998). Drawing on previous research on managerial aspirations (Gould & Penley, 1984; Rynes, Tolbert, & Strausser, 1988), Tharenou and Terry (1998; also K. A. Pearce, Terry, & Tharenou, 1994) identify six behavioural strategies³³ that reflect the extent to which individuals are “engaged in behavioral attempts associated with gaining management positions” (p. 477; see Table 4.1).

Table 4.1
Conceptualisations of proactive career behaviour

	Career planning	Career consultation	Skill development	Net-working	Feedback seeking
Tharenou & Terry (1998)	x	x	x		x
Claes & Ruiz-Quintanilla (1998)	x	x	x	x	
Seibert, Kraimer, & Crant (2001)	x	x	x		

Seibert, Kraimer and Crant (2001) focus on three of these aspects (career planning, skill development, and consultation with senior members of the organization) in their concept of career initiative. Claes and Ruiz-Quintanilla (1998) similarly integrate previous literature and focus on four different proactive career behaviours: career planning (Bachman, O'Maley, & Johnston, 1978) refers to behaviours aimed at actively shaping the future such as exploring options, setting goals, and formulating plans; skill development (Penley & Gould, 1981) refers to initiatives and interventions that lead to mastery of the various tasks involved in one's occupation. It includes cumulating work experiences and increasing career-relevant knowledge, skills, and abilities, some of which may not be required in one's current role or job

³³ Five of these behaviours are shown in Table 4.1. The sixth behaviour (volunteered for activities other than day-to-day work tasks, such as working parties and selection panels) showed a factor loading smaller than .60 and was “factorially complex” and “retained [...] because of its face validity” (Tharenou & Terry, 1998, p. 477). For these reasons, I excluded this strategy from this overview.

and some of which might be future-oriented; career consultation (Bachman et al., 1978) involves seeking information, advice, or help about career-related matters from others; networking (Penley & Gould, 1981) finally refers to behaviour aimed at “build[ing] interpersonal networks in which to seek information, advice, or help” (Claes & Ruiz-Quintanilla, 1998, p. 360).

In summary, there is reasonable consensus on the behaviours through which individuals actively attempt to shape their future career. In the present study, I draw on Kossek and colleagues’ (1998) work on career self-management to distinguish between behaviours that are primarily aimed at continuous improvement in one’s current job and behaviours related to future career opportunities. Kossek et al. (1998) distinguish between two types of behaviours related to career self-management. First, developmental feedback seeking involves behaviours aimed at continuous improvement in one’s current job. Second, proactive career behaviours³⁴ involve behaviours related to future career opportunities, such as career planning, consultation, networking, and the development of skills required in future positions.

Feedback seeking. In improving their performance and developing their skills, employees increasingly need to “devise creative ways and sources to ascertain they are on the right track” (Ashford et al., 2003, p. 774). Proactive feedback seeking (Ashford, 1986; Ashford & Cummings, 1983) is one such way. Self-initiated or proactive feedback seeking refers to employees’ voluntary and anticipatory actions to obtain evaluations of their performance (Ashford & Black, 1996; Ashford et al., 2003; Ashford & Cummings, 1983). Rather than reactively waiting for their supervisors to provide feedback, employees who engage in proactive feedback seeking actively monitor their environment to obtain information about their performance or explicitly verbally request feedback. Feedback seeking is a way to take initiative to further one’s career development and to identify ways to improve one’s performance (London, Larsen, & Thisted, 1999). In the present study I distinguish between positive and negative feedback seeking. While positive

³⁴ Kossek et al. (1998) refer to proactive career behaviours as “job mobility preparedness”. Following Claes and Ruiz-Quintanilla (1998) I refer to these behaviours as proactive career behaviours throughout this thesis.

feedback is frequently given and seeking positive feedback is unlikely to yield new information on how to improve one's performance, negative feedback has a higher diagnostic value for improving one's performance (Ashford & Tsui, 1991). Seeking negative feedback is therefore particularly important for career self-management. I discuss different motives underlying positive and negative feedback seeking in more detail below.

Proactive career behaviours. In boundaryless careers, individuals need to be prepared and ready to act on career opportunities (Kossek et al., 1998). This preparation involves proactively gathering information about career opportunities (Hall, 1991), such as through informal networking; and preparing to act on these opportunities, such as by developing the skills required in potential future employment. I focus on four proactive career behaviours following Claes and Ruiz-Quintanilla (1998) as described above: career planning, career consultation, and networking, which can mainly be seen as aimed at gathering information on potential career opportunities; and proactive skill development.

Both feedback seeking and proactive career behaviours involve the anticipation of future requirements. They can also be effortful, time-consuming and even risky. For example, behaviours such as feedback seeking are seldom reinforced by immediate rewards, and can come with image risks (Ashford & Blatt, 2003; Miller, & Jablin, 1991) or ego risks (Ashford & Cummings, 1983). The feedback can even be threatening to one's current career identity. Proactive career behaviours also require employees to prioritize future outcomes over short-term benefits. There is evidence that the degree to which individuals value distant rather than immediate outcomes of their behaviour plays an important role in their career development (Marko & Savickas, 1998), and a future-focus has been shown to predict proactive career behaviours such as initiating conversations about careers or actively seeking feedback from supervisors (Parker & Collins, 2009).

Because of some of the risks and challenges inherent in feedback seeking and proactive career behaviours, it is important to understand what motivates these types of behaviour. I propose next that FWS are especially important for motivating these behaviours.

4.2.2 Future work selves and their impact on proactive career behaviours and feedback seeking

I have discussed the link between FWS and proactive behaviours in general in detail in 2.3. Here, I explore more specifically the link between FWS and proactive career behaviours as well as feedback seeking, and propose that FWS motivate these behaviours through three different mechanisms. First, FWS “personalize” (Meara et al., 1995, p. 259; see also Markus & Ruvolo, 1989) career planning. They tie the self into career-related goals that motivate self-guided behaviours with little external reinforcement. Second, they orient the individual towards the future. As observed above, future orientation is a critical determinant of career development (e.g., Marko & Savickas, 1998). Individuals with a higher future orientation are more likely than individuals with a lower future orientation to take a long-term career perspective which is required for career self-management behaviours. Third, FWS give meaning to current behaviours. Striving to attain a highly desired FWS has immediate effects on one’s self-evaluation, and anticipated effects on future self-evaluation. The connection to a self-defining future identity gives meaning to proactive management behaviours even if they are risky or require putting aside short-term gains. The positive self-evaluation compensates for the lack of immediate rewards.

For the above reasons, I expect the FWS to predict proactive career behaviours and feedback seeking. As discussed in detail in 2.1.5, the extent to which FWS and other possible selves guide and direct behaviour depends on the characteristics of the self. Different identities within an individual’s self-concept differ in their centrality (Markus & Wurf, 1987). The centrality of an identity determines its influence on affect and behaviour. Identities that are core conceptions (Gergen, 1965), or salient identities (Stryker, 1980, 1986), have a stronger influence on behaviour than more peripheral identities. In this study I focus on three different, but connected aspects that relate to the centrality of an individual’s FWS (accessibility, exclusivity, and importance) and thus to its influence on behaviour (see also 2.1.5).

Accessibility. For a future identity to motivate behaviour, it needs to be available and accessible in an individual's memory (Norman & Aron, 2003). Identities can – like other mental constructs – become chronically accessible due to frequent activation; that is, if we frequently think of them and use them (Bargh, 1982; Higgins et al., 1982; Srull & Wyer, 1986). The accessibility of a FWS in an individual's working memory depends on the current chronic interest in this specific future self, or the degree through which it is actively considered by the individual (L. A. King & Smith, 2004).

Exclusivity. Exclusivity refers to the centrality of a specific future work self in relation to alternative future work selves. The self-concept is a collection of (potentially competing) identities (Markus & Wurf, 1987). A FWS can either be one of a collection of similarly central FWS the individual holds, or it can be the only FWS at the core of an individual's self-conception – an exclusive FWS. A more exclusive FWS will be activated more frequently in an individual's working memory than one that is competing with a broad array of alternative FWS, and will thus have a stronger influence on behaviour.

Importance. Importance refers to the commitment to a FWS. Commitment to an identity leads to more striving towards its attainment (Wicklund & Gollwitzer, 1982). Individuals who are committed to a specific identity want to make it an enduring part of who they are.

The more accessible, exclusive, and important a FWS is the stronger will be its influence on individuals' behaviour.

4.2.2.1 Career identity and the future work self

I propose not only that the FWS is related to career identity, but that it is a unique driver of proactive career behaviours and feedback seeking over and above career identity. As I discussed above, the FWS can be seen as part of a broadly conceptualized career identity (Ashforth & Fugate, 2001; Fugate et al., 2004) but there is little research distinguishing between current and future-oriented aspects of career identities. In this thesis, I distinguish between current and future identities. Though closely related to individuals' current identification with their career, the FWS gives particular meaning to self-initiated, future-oriented career behaviours that goes beyond current career

identity. I argue that these behaviours are motivated not only by how much individuals define themselves in terms of their current career, but by their attachment to their imagined future career.

4.2.2.2 Future orientation and the future work self

Above, I have discussed the centrality of individuals' consideration of the future rather than the immediate outcomes for proactive career behaviour. Individuals' future orientation (Strathman et al., 1994) plays an important role in their career development (Marko & Savickas, 1998), and has been shown to predict proactive career behaviours (Parker & Collins, 2009). I argue that the FWS captures more than just a general orientation towards the future. Individuals high on future orientation are likely to have more accessible and important FWS. In turn, one of the mechanisms through which FWS motivate proactive career behaviour and feedback seeking is by focusing individuals on distant rather than on proximal outcomes (Meara et al., 1995). I propose that inducing a focus on future outcomes is only one mechanism through which FWS influence proactive career behaviours and feedback seeking. They also provide an image of what the future could be like, which can facilitate mental simulation and serve as a source of more proximal career goals. As discussed above, FWS compensate for the lack of immediate outcomes by influencing individuals' self-evaluation.

I propose not only that the FWS is related to career identity and future-orientation, but that it is a unique driver of proactive career behaviour over and above these two concepts. In sum, I propose the following Hypotheses:

H1a. The accessibility of the FWS will be positively related to proactive career behaviour.

H1b. The importance of the FWS will be positively related to proactive career behaviour.

H1c. The exclusivity of the FWS will be positively related to proactive career behaviour.

With regard to feedback seeking, I consider whether individuals seek positive and/or negative feedback. I propose that a FWS is especially important for negative feedback seeking. Employees are unlikely to receive spontaneous

negative feedback, yet its higher diagnostic value makes it particularly valuable for improving one's performance (Ashford & Tsui, 1991). Positive feedback on the other hand is frequently given and seeking positive feedback is unlikely to yield new information on how to improve one's performance (Ashford & Tsui, 1991). Negative feedback has a higher diagnostic value than positive feedback but can be hurtful to individuals' image (Ashford et al., 2003; Ashford & Tsui, 1991), and ego (Ashford & Cummings, 1983). In order to avoid harming their image or their ego, employees may even forgo the benefit that feedback might have for their performance (Ashford & Northcraft, 1992).

Different motives can underlie individuals' feedback seeking and determine whether they will seek negative or positive feedback. Individuals can be motivated by the desire to gain useful information on their performance (instrumental motive) (Ashford & Cummings, 1983). Following an underlying instrumental motive, individuals seek feedback because they acknowledge that it helps them to improve their performance and pursue their goals.

Alternatively, they can wish to protect their ego and self-esteem from the effects of negative feedback about their performance (ego-protect motive) (Ashford & Cummings, 1983). They can also be motivated to control the impressions of others, i.e. to both avoid an unfavourable impression and to create a favourable impression (impression-management motive) (Morrison & Bies, 1991). While an instrumental motive may lead to the seeking of negative feedback, which may be more diagnostic than positive feedback (Ashford & Tsui, 1991), ego-protect- and impression-management motives are likely to lead to the seeking of positive feedback.

I propose that seeking negative feedback is at least partially motivated by individuals' FWS. The desire to bring about a hoped for future for one's career can give meaning to gaining information to improve one's performance, and help overcome concerns about one's ego or image.

I further expect the desire to collect useful information to improve one's performance to be one important mechanism through which the FWS motivates negative feedback seeking. Individuals with an accessible, exclusive, and important future work self are more likely to see negative feedback as instrumental for improving their performance. As elaborated above, they will

be more oriented towards the long-term outcomes of their behaviour, and thus more likely to see the possible benefit of feedback for their future performance. The desire to develop can enhance the instrumental motive.

H2a: The accessibility of the FWS will be indirectly related to negative feedback seeking via a positive link to an instrumental motive.

H2b: The importance of the FWS will be indirectly related to negative feedback seeking via a positive link to an instrumental motive.

H2c: The exclusivity of the FWS will be indirectly related to negative feedback seeking via a positive link to an instrumental motive.

Further I expect the FWS to shelter individuals' ego from the potentially hurtful effects of negative feedback. Negative feedback can make individuals aware of a discrepancy between their current self (including their skills and their performance), and their desired present self, or their desired future respectively. While a discrepancy between one's current self and one's desired present self is threatening to one's ego and can lead to a negative self-evaluation, a discrepancy between one's current self and a desired future self has different implications for motivation and affect (Boldero & Francis, 2002) (see also 2.2.1.) A FWS provides the sense that the self is malleable, and that one's skills are not fixed, but subject to change and development. Its location in the future provides some latitude for correction and development (Pennington & Roese, 2003). The FWS will protect individuals' ego from the hurtful effects of negative feedback and decrease the ego protection motive. Thus, I propose:

H3a: The accessibility of the FWS will be indirectly related to negative feedback seeking via a negative link to an ego protection motive.

H3b: The importance of the FWS will be indirectly related to negative feedback seeking via a negative link to an ego protection motive.

H3c: The exclusivity of the FWS will be indirectly related to negative feedback seeking via a negative link to an ego protection motive.

The relationship between the FWS and the impression management motive is less clear. On one hand, I would expect that the FWS will decrease individuals' concern with their image, especially if the future they imagine is not tied into their current organization. As argued above FWS can make

individuals more aware of the malleability of their self, and thus also of their image. On the other hand, their supervisor may play an important role in their future career and provide help in attaining their desired future. A FWS would then make individuals more concerned with how they are perceived by their supervisor and would motivate them to create a favourable impression.

Therefore I can advance no Hypothesis regarding the relationship between the FWS and the impression management motive. The analysis of this relationship will be exploratory.

4.3 Method

4.3.1 Procedure and participants

Data was collected from a sample of 297 postgraduate research students at a large university in England who participated in a web-survey. An email was sent to all postgraduate research students via a mailing list hosted by the university's computing services explaining the purpose of the study and encouraging them to take part in the web-survey. Two reminder emails were sent after about 2 and 4 weeks, respectively. After filling out the web-survey, participants received immediate feedback on how they rated themselves on a number of personality traits, and practical advice in relation to their personal working style. I received valid responses from 297 individuals, representing a response rate of 14% of the post graduate student registered at the university³⁵.

³⁵ As discussed in 3.4.1, in web-based research the number of participants actually contacted is difficult to know due to deactivated addresses, server errors and other problems interfering with the on-line recruiting process (Stanton & Rogelberg, 2001). Web surveys often attain lower response rates than paper surveys (S. D. Crawford et al., 2001). Although the response rates reported for web surveys vary strongly between studies (Sax et al., 2003; Simsek & Veiga, 2000), similarly low response rates are not uncommon and are particularly frequent in student samples (Kaplowitz et al., 2004; Porter & Whitcomb, 2003; Sax et al., 2003). In their meta-analysis, Cook, Heath, and Thompson (2000) find a strong negative effect of academic settings on the response rate in web surveys. The population of graduate student in my sample is frequently targeted with web surveys which are often used to collect data for student projects and graduate students occasionally receive several emails per day inviting them to participate in web surveys.

58.2% of the respondents were female. Participants were between 21 and 61 years old, with over 70% aged between 23 and 30. 23.5% of participating students were in the first year of their degree, 25.5% in their second year, and 23.2% in their third year. 15.4% were in their fourth year, and 8.1% of students had been studying for a PhD for five years or longer.

Compared to the overall population of postgraduate students³⁶, my sample included a higher percentage of female students ($\chi^2 = 16.40$, $df = 1$), and a higher percentage of full time students ($\chi^2 = 17.27$, $df = 1$) than the overall population of graduate students at the university. The age distribution of students differed as well ($\chi^2 = 41.47$, $df = 3$), with the sample containing a higher percentage of students in the group of 25 to 39 year olds and a lower percentage in the group of 21 to 24 year olds. This may be because the population of postgraduate students also includes students in Master's programs, while the survey specifically targeted postgraduate research students who are likely to have already completed a Master's course and may on average be older.

4.3.2 Measures

I used 5-point scales for all measures described below, with scale anchors ranging from "strongly disagree" (1) to "strongly agree" (5).

4.3.2.1 Independent variables

Participants in the survey were asked to mentally travel into the future and to write down how they see themselves. They are asked to imagine that what they hoped for their future has become reality, and to keep this mental image in mind. Participants then wrote a short description of what they imagined. An example is shown in the introduction. This narrative served as the basis of their consecutive ratings of the characteristics of their FWS. A

³⁶ As mentioned in 3.3.1, no separate records were kept by the university for research students and other postgraduate students in terms of their age and gender. Out of the total of the postgraduate student population, 51% of were female, and 54% were between 21 and 24 years old, 41% between 25 and 39. These numbers were obtained from the university's Corporate Planning Office.

similar procedure has been used to collect narratives of individuals' life goals (L. A. King, 2001; L. A. King & Smith, 2004). The development of the instruction for the narrative is described in detail in 5.2.1.

Accessibility of the FWS ($\alpha = .78$). Participants rated the mental clarity, accessibility and availability of the scenario they imagined. The three items were adapted from King and Smith's (2004) measure of salience of possible selves. An example item is "The mental picture of this future is very clear".

Importance of the FWS ($\alpha = .84$). Three items assessed the perceived importance of the FWS, which were adapted from Norman and Aron's (2003) measure of the motivation to achieve a hoped for future self. An example item is "It is very important for me to make this future become reality."

Exclusivity of the FWS ($\alpha = .84$). The exclusivity of the FWS was assessed with three items. An example item is "This is only one of many possible futures I imagine for myself".

The construct validity of the FWS variables was assessed in a confirmatory factor analysis as part of the measurement model, which I describe below.

Future orientation ($\alpha = .78$). Future orientation was assessed with three items from the consideration of future consequences scale by Strathman and colleagues (Strathman et al., 1994). An example item is "I consider how things might be in the future, and try to influence those things with my day to day behaviour".

Career identity ($\alpha = .84$). 4 items measuring career identity were adapted from Carson & Bedeian's career commitment scale (Carson & Bedeian, 1994). An example item is "Having a career in my field is an important part of who I am".

4.3.2.2 Dependent variables

Feedback-seeking behaviours. Negative ($\alpha = .85$) and positive feedback seeking ($\alpha = .69$) was assessed with four and three items, respectively, which were adapted from Ashford & Tsui's (1991) measure of feedback types. The wording was changed slightly to fit the context (e.g., "I ask my supervisor to be critical when he/she gives me feedback").

Feedback-seeking motives. Items to assess motives for feedback seeking were adapted from Tuckey, Brewer, & Williamson's (2002) measure of feedback seeking motives. Ego motive ($\alpha = .81$) and instrumental motive ($\alpha = .86$) were assessed with three items each. An example item for the ego motive is "It's hard to feel good about myself when I receive negative feedback". An example item for the instrumental motive is "Receiving feedback about my work helps me to improve my skills". The impression management motive ($\alpha = .84$) was assessed with four items. An example item that has been reworded to suit the context is "I seek feedback from my supervisor because I hope this will make a good impression".

Proactive career behaviour. Proactive career behaviour was operationalized by combining items from Bachman, O'Maley and Johnston (1978) and Penley and Gould (1981) similar to Claes and Ruiz-Quintanilla (1998). Items were adopted slightly to fit the context (e.g., "I seek advice from my supervisor(s) or colleagues about additional training or experience I need in order to improve my future work prospects"). Proactive skill development ($\alpha = .74$) and career consultation ($\alpha = .79$) were assessed with three items each. Network building ($\alpha = .82$) and career planning ($\alpha = .89$) were each assessed with four items. The four subscale scores were used as indicators of the proactive career behaviour factor in the measurement model as I describe below.

4.3.2.3 Control variables

Demographics. Demographic variables collected included participants' age, gender, and their year of study.

4.4 Results

Means, standard deviations, and inter-correlations of the study variables are shown in Table 4.2. Accessibility and importance of the FWS were significantly related to career identity ($r = .30$, $p < .001$, and $r = .43$, $p < .001$, respectively) and future orientation ($r = .30$, $p < .001$, and $r = .47$, $p < .001$, respectively) as expected. The exclusivity of the FWS was not significantly related to either career identity or future orientation.

The impression management motive for feedback seeking was not significantly related to any of the study variables and was excluded from further analyses.

4.4.1 Measurement model

To examine the factor structure underlying the FWS variables and assess the discriminant validity of the constructs in the study I tested a series of measurement models using MPlus (Muthen & Muthen, 2004) with maximum likelihood estimation. I estimated an 11-factor measurement model distinguishing between all of the constructs of the study, treating the FWS variables as separate constructs. All factors were defined by individual items except for proactive career behaviour, where the scale means of the four subscales career planning, career consultation, network building and proactive skill development were used as indicators of the factor. Age, gender and year of study were included as control variables.

This model also included a single common method factor to control for the potential influence of common method variance, following the recommendations of Podsakoff, MacKenzie, Lee, and Podsakoff (2003). The loadings from this method factor to the 28 items and the four subscale means of career planning, career consultation, network building and proactive skill development were free to vary. Loadings ranged between $-.74$ and $.65$, and all but 8 loadings on this factor were significant, indicating that significant method effects were present.

Table 4.2.
Means, standard deviations and correlations among study variables

		1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age	30.38 (8.12)													
2. Gender	1.58 (.49)	.08												
3. Year of study	2.57 (1.25)	.17**	-.05											
4. Career identity	3.69 (.87)	.06	.12*	-.07										
5. Future-orientation	3.39 (.81)	-.06	.01	-.13*	.29***									
6. Accessibility of FWS	3.35 (1.06)	.17**	.13*	-.04	.30***	.30***								
7. Importance of FWS	3.84 (.80)	.06	.07	.09	.44***	.49***	.43***							
8. Exclusivity of FWS	2.72 (.92)	.03	.01	.02	.03	.03	.03	.22***						
9. Instrumental motive	4.26 (.65)	.08	.11	-.02	.30***	.26***	.28***	.38***	-.16**					
10. Impression management motive	2.81 (.91)	.01	.04	-.07	-.01	-.02	-.04	.06	-.03	.04				
11. Ego protection motive	2.83 (.91)	-.03	.10	-.01	-.01	-.11	-.17**	-.07	.19**	-.22**	.30***			
12. Negative feedback seeking	3.68 (.76)	.10	.07	.18**	.20**	.22***	.22***	.25***	-.14*	.48***	-.09	-.40***		
13. Positive feedback seeking	2.58 (.74)	-.01	-.04	-.05	-.06	-.04	-.11	-.02	.13*	-.25***	.34***	.58***	-.36***	
14. Proactive career behaviour	3.34 (.61)	-.08	.13*	-.10	.39***	.48***	.34***	.40***	-.09	.38***	.14*	-.16**	.33**	-.12*

*p < .05, **p < .01, ***p < .001

Thus, a common method factor was included in the measurement model and the structural models tested subsequently. This measurement model showed a good fit to the data ($\chi^2 = 803.28$, $df = 486$, $CFI = 0.93$, $RMSEA = 0.05$, $SRMR = 0.05$; see Table 4.3).

Table 4.3.
Model comparisons

Model	χ^2	df	CFI	$RMSEA$	$SRMR$
Measurement model	803.28	486	0.93	0.05	0.05
Revised measurement model	712.99	453	0.94	0.05	0.05
Structural model 1 (only indirect paths)	726.82	466	0.94	0.05	0.05
Structural model 2 (only direct paths)	808.61	475	0.92	0.05	0.06
Structural model 2 (direct and indirect paths)	719.16	456	0.94	0.05	0.05

The modification indices and expected parameter change values indicated that one of the FWS items loaded on a different factor than intended, and this item was eliminated from further analysis. The resulting model showed a good fit to the data (Revised measurement model: $\chi^2 = 712.99$, $df = 453$, $CFI = 0.94$, $RMSEA = 0.05$, $SRMR = 0.05$; see Table 4.3). The resulting factor loadings of the FWS items were all above .60 and are shown in Table 4.4. This model served as the basis for consecutive model comparison.

Table 4.4.
Item loadings for future work self items

	F1 Accessibility	F2 Importance	F3 Exclusivity
This future is very easy for me to imagine.	0.77		
The mental picture of this future is very clear.	0.94		
It is very important for me to make this future become reality.		0.81	
I would very much like this future to become reality.		0.67	
I plan with this future in mind.		0.76	
This is only one of many futures I imagine for myself.			0.64
I see many possible paths for myself in the future.			0.86
I can imagine many different futures for myself.			0.88

I then investigated the hypothesized relationships through structural equation modeling. A model with only indirect paths from the FWS variables, and career

identity and future orientation to the feedback seeking behaviors via the feedback seeking motives resulted in a good fit to the data (Structural model 1; $\chi^2 = 726.82$, $df = 466$, $CFI = 0.94$, $RMSEA = 0.05$, $SRMR = 0.05$; see Table 4.3), and did not differ significantly from the measurement model ($\Delta\chi^2(df = 13) = 13.83$, *n.s.*). Following the recommendations of Mathieu and Taylor (2006), I then fitted a model with direct paths from all antecedents to the feedback seeking behaviors, with no paths leading to or stemming from the feedback seeking motives, although the feedback seeking motives remained as latent variables in the model (Structural model 2; $\chi^2 = 808.61$, $df = 475$, $CFI = 0.92$, $RMSEA = 0.05$, $SRMR = 0.06$; see Table 4.3). This model differed significantly from the measurement model ($\Delta\chi^2(df = 9) = 81.79$, $p < .05$), which supports the importance of the feedback seeking motives in the relationship between the antecedents and negative feedback seeking. In the context of this model, none of the paths from the FWS variables to negative feedback seeking were significant.

I then tested a model with both direct and indirect paths from the FWS variables, as well as from career identity and future orientation, to the feedback seeking behaviors (Structural model 3; $\chi^2 = 719.16$, $df = 456$, $CFI = 0.94$, $RMSEA = 0.05$, $SRMR = 0.05$; see Table 4.3). This model did not differ significantly from the measurement model ($\Delta\chi^2(df = 3) = 6.17$, *n.s.*); however, it was not a significant improvement over the model with only indirect paths ($\Delta\chi^2(df = 10) = 7.66$, *n.s.*). In the context of this model, none of the direct paths between the FWS variables, career identity and future orientation, and the feedback seeking behaviors were significant. The more parsimonious model with only indirect paths from the FWS variables, and career identity and future orientation (Structural model 1) served as the basis for assessing each hypothesis. Paths in this final model are shown in Figure 5.

Hypothesis 1a, 1b, and 1c, which proposed a positive relationship between the FWS variables and proactive career behaviour, were not supported. Contrary to my expectations, there were no unique relationships between the accessibility and importance of the FWS and proactive career behaviour ($\beta = .09$, *n.s.*, and $\beta = .10$, *n.s.*, respectively) after controlling for other measures and the common method factor. The exclusivity of the FWS had a negative relationship with proactive career behaviour ($\beta = -.18$, $p < .05$).

Hypothesis 2a, 2b, and 2c proposed that there would be indirect relationships between FWS variables and negative feedback seeking via an instrumental motive. The final model shows that the instrumental motive had a significant positive relationship with negative feedback seeking ($\beta = .23, p < .05$). The accessibility of the FWS was not significantly related to the instrumental motive so Hypothesis 2a was not supported. The importance of the FWS was positively related to the instrumental motive ($\beta = .39, p < .05$) and the indirect positive relationship with negative feedback was significant (Sobel = 2.32, $p < .05$), so Hypothesis 2b was supported. Contrary to my expectations, the exclusivity of the FWS was negatively related to the instrumental motive ($\beta = -.34, p < .05$), failing to support Hypothesis 2c. The negative indirect effect on negative feedback seeking was however not significant (Sobel = -1.82, *n.s.*).

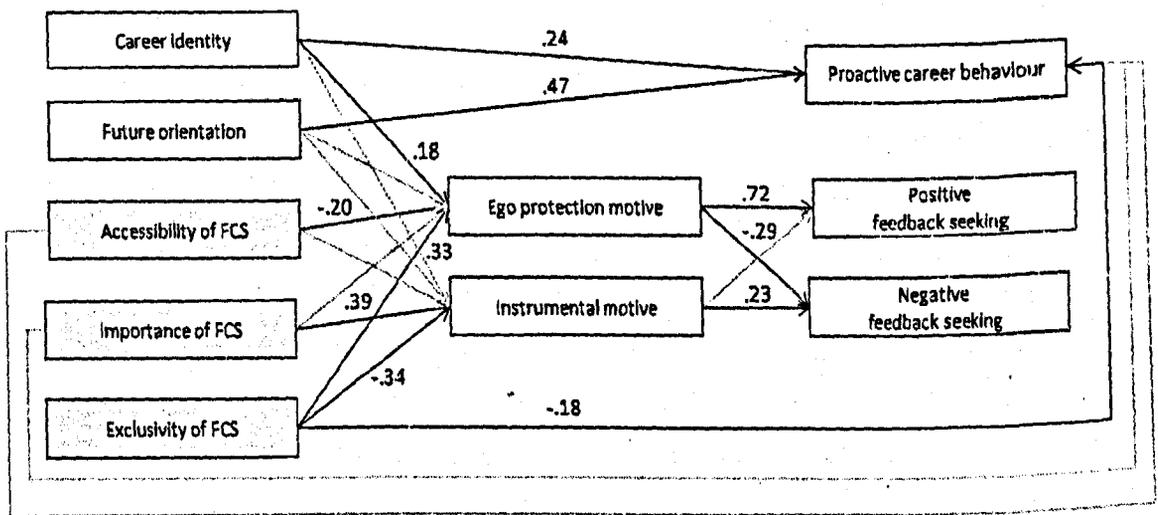


Figure 5. Structural model including a Common Method factor and control variables age, gender, and year of study

Hypothesis 3a, 3b, and 3c proposed that there would be an indirect relationship between FWS variables and negative feedback seeking via an ego protection motive. The final model shows that the ego protection motive had a significant negative relationship with negative feedback seeking ($\beta = -.29, p < .05$). The accessibility of the FWS was negatively related to the ego protection motive ($\beta = -.20, p < .05$) and the indirect positive relationship with negative feedback was significant (Sobel = 1.99, $p < .05$) supporting Hypothesis 3a. Hypothesis 3b was not supported because the importance of the FWS was not significantly related to the ego protection motive. Contrary to my expectations again, the exclusivity of the FWS

was positively related to the ego protection motive ($\beta = .33, p < .05$) and the indirect negative effect on negative feedback seeking was significant (Sobel = -2.65, $p < .05$).

I did not hypothesize a relationship between the FWS variables and positive feedback seeking. However, an ego protection motive was positively related to positive feedback seeking ($\beta = .72, p < .05$), and there was a significant indirect negative effect of the accessibility (Sobel = -2.21, $p < .05$), and a significant positive effect of the exclusivity of the FWS (Sobel = 3.28, $p < .01$) via an ego protection motive.

In summary, I found support for a positive indirect effect of accessibility of the FWS on negative feedback seeking through a lower ego protection motive, and a positive indirect effect of importance of the FWS on negative feedback seeking through a higher instrumental motive.

4.5 Discussion

The aim of the current chapter was to extend our understanding of the role of FWS in the motivation of proactive career behaviours and feedback seeking. While the zero-order correlations broadly supported the proposed hypotheses, with the exemption of hypotheses 1c, 2c, and 3c. The exclusivity of the FWS was not related to other concepts in the study in the proposed direction, as I discuss below. Both the accessibility and the importance of the FWS were positively related to proactive career behaviour ($r = .34, p < .001$, and $r = .40, p < .001$, respectively), and negative feedback seeking ($r = .22, p < .001$, and $r = .25, p < .001$, respectively). However, once a common method factor had been taken into account, and career identity and future orientation had been simultaneously included in the model, there were no direct significant relationships between the FWS variables, and self-reported proactive behaviours.

Overall, my results indicated that characteristics of the FWS were related to feedback seeking motives after accounting for the identification with one's career, and a general tendency to focus on long-term rather than short-term consequences of one's behavior. These findings support a distinction between current career identities and FWS. Identification with one's career is a powerful predictor of career related behaviours because it directs one's effort towards career goals (e.g., Bhagat & London, 1999). The current findings were consistent with this prior research; career

identity was a strong predictor of individuals' proactive career behaviour. However, I argued that FWS more specifically focus individuals' efforts on goals directed towards future impact, and thereby should be important for proactive career behaviours and feedback seeking. This idea was broadly supported by my finding that the accessibility of the FWS had a negative effect on individuals' ego protection motive, while career identity was positively related to an ego protection motive. A focus on the future seems to shelter individuals from the potentially hurtful effects of negative feedback, while a strong (current) career identity may make individuals' ego more vulnerable to negative feedback.

My findings also suggest that future work selves are more important than just a general future orientation. Individuals' tendency to value long-term over short-term outcomes, or their future orientation, has been suggested to be important for proactive career management (Meara et al., 1995), and my study also confirmed this. However, my study also showed the importance of future work selves in the motivation of negative feedback seeking over and above a general future orientation, suggesting there is something unique about a future career focus. I have argued that imagination of the desired future facilitates mental simulation (Kosslyn, 1987); it enables individuals to envision different possibilities and to generate plans to realize those possibilities (Taylor et al., 1998). A concrete, orienting image of one's desired future that involves the self seems to serve as a source of career-related goals. In addition, a FWS that is accessible in an individual's memory not only focuses the individual on progress rather than current states, it perhaps also allows them to tolerate currently unsatisfying conditions (Lord et al., 1999) because they perceive them as transitory step towards a more distant future (Fried & Slowik, 2004).

My study also showed the importance of some characteristics of future work selves over and above others. The accessibility of the FWS, or the degree to which it is available and accessible in an individual's memory (Norman & Aron, 2003), was negatively related to an ego protection motive, after controlling for career identity and future orientation. Although causal direction is yet to be established, this result suggests that an accessible FWS shelters individuals from the potentially hurtful effects of critical feedback on their ego and thus encourages negative feedback seeking. As discussed above, career identity had a positive effect, suggesting that individuals who strongly identify with their (current) career may be more vulnerable

to the hurtful effects of negative feedback on their performance in their current job or career line. An accessible image of one's FWS on the other hand may help individuals to perceive negative feedback on their current performance as less threatening.

The importance of the FWS was moderately correlated with both career identity ($r = .43$) and future orientation ($r = .47$), suggesting that the importance of the FWS is closely related to the degree to which "one defines oneself by work" (London & Noe, 1997, p. 62) and one's general tendency to value future outcomes. The importance of the FWS was positively associated with the instrumental feedback seeking motive. Thus perceiving a FWS as important might influence behavior indirectly by making the usefulness of feedback for future performance more salient.

Contrary to expectations, the exclusivity of a FWS had a negative relationship with proactive career behaviour and an instrumental feedback seeking motive, and a positive relationship with an ego protection motive. Although further research is needed to establish causality, this intriguing finding suggests that having only one FWS, and not being able to imagine other possible career paths for oneself, is threatening to an individual's ego and thus motivates them to seek positive feedback on their performance and to avoid critical feedback. A negative effect of an exclusive FWS on career self-management behaviors could occur if the individual feels that the future they imagine for themselves will become reality regardless of their own behavior. Alternatively, individuals who are not yet set on one exclusive future self may still be developing their FWS and therefore be more interested in gathering information on potential career opportunities, and in seeking realistic feedback on their potential. These alternative possibilities deserve future investigation.

4.5.1 Implications for practice and future research

Developing individuals' future work selves might be an important mechanism through which career development interventions can influence proactive career behaviours. My results suggest that a clear and accessible image of one's ideal FWS is indirectly associated with self-initiated feedback seeking. This finding has implications for research on the use of role models in one's career development. In particular early in their career, individuals use role models to construct their ideal

and possible selves (Cross & Markus, 1991; Gibson, 2003; Ibarra, 1999; Markus & Nurius, 1986). My findings suggest that the increased accessibility of a FWS in their working memory is one possible mechanism through which role models can influence individuals' feedback seeking. Future research is needed to explore the effect of role models on the characteristics of the FWS and on individuals' motivation to attain this possible self.

Increasing the accessibility of a hoped for FWS is also a possible mechanism for leadership to influence employees' feedback seeking. Leaders can have a strong influence on employees' self-views (e.g., Eden, 1992). By expressing high expectations and confidence in the employee's ability and potential they can help nourish hoped for future selves (Lord et al., 1999).

It is questionable how accurate individuals' anticipation of their future career needs to be. It might be that accuracy is unimportant. Rather being set on a specific FWS and exerting effort to influence the (potentially distant) future might keep individuals from responding positively to changing circumstances and being flexible in the face of emerging opportunities. King & Raspin's (2004) research on lost future selves in divorced women shows that a clear and accessible image of the self one 'might have been' can result in lowered life satisfaction, meaning in life, and heightened distress. Similarly, realizing that an accessible and important FWS will not become reality could threaten one's subjective well-being and potentially one's career identity. In addition, attaining one's hoped for FWS may not be as satisfying as imagined. Individuals tend to overestimate their affective reaction to future events (see e.g., Dunn & Laham, 2006; Wilson & Gilbert, 2003), which can lead them to pursue goals the attainment of which is unlikely to result in genuine happiness (D. T. Gilbert & Wilson, 2000). All of these issues have yet to be investigated.

4.5.2 Limitations of the present study

Data was collected from a sample of postgraduate research students, which is an appropriate sample for my study, because these students face a more or less impending career transition. However, the characteristics of the sample might also limit the generalizability of my findings. First, proactive career behaviours are likely to be particularly frequent in this population. Giving and receiving feedback, building networks, and developing career management skills are competencies that

postgraduate research students are expected to develop during the course of their PhD degree program³⁷. In addition, postgraduate research students are facing a career transition and often take part in career development activities (e.g., doctoral consortia), which may increase proactive career behaviours, and lead to a more accessible FWS. Nonetheless, despite these limitations of the sample, it is important to observe that the ratings of proactive career behaviours in my sample were similar in range to the ones reported by Claes & Ruiz-Quintanilla (1998) and Ashford & Tsui (1991) who used the same scales in organizational settings.

In addition, postgraduate research students are likely to have future work selves that are highly discrepant from their current identity as a graduate student. For this reason I assessed career identity broadly as students' identification with their chosen career field rather than focusing on the characteristics of students' current work-related identity. Future research needs to explore the present and future-oriented aspects of career identities in samples with a more durable current identity.

This study was cross-sectional, so causality cannot be inferred. Based on theory and past research I assumed that the FWS would influence proactive career behaviours, but the reverse may also be true (e.g., engaging in career planning might lead to a more accessible FWS, rather than the reverse causal relationship that I considered). Future research utilizing longitudinal designs is needed to explore the possibly dynamic relationship between future work selves and proactive career behaviours.

This study also relied on self-report data. Since the FWS variables are mainly ratings of the characteristics of a cognitive structure and based on individuals' immediate experiences of describing their FWS, I believe that they are less likely to suffer from problems of common method variance. My study also showed that the FWS variables related in meaningfully different ways with the outcomes, suggesting that more was occurring than just common method bias. In addition, I included a single common method factor in my model to control for the potential influence of common method variance, following the recommendations of Podsakoff and

³⁷ As stated for example by the United Kingdom Research Councils and the Arts and Humanities Research Board (Joint statement of the UK research councils' training requirements for research students, 2001); see Gilbert, Balatti, Turner, & Whitehouse, 2004 for a discussion of generic skills in research higher degrees in the UK, the US and Australia

colleagues (2003). However, future research may overcome potential method effects by attaining peer- or supervisor ratings of proactive career behaviour and feedback seeking behaviors. Nonetheless, further replication of this study should include multi-source ratings of career behaviours, or objective indicators (e.g., the number of jobs applied for).

4.6 Conclusion

In today's careers, individuals need to feel a sense of ownership over their career and take responsibility for its achievement. This study provides initial support for the role of future work selves in motivating the seeking of critical feedback. The findings show that a clear and accessible image of one's self in the future predicts attempts to improve one's performance by seeking critical feedback over and above the broader identification with one's career as well as a more general orientation towards the future. Helping individuals to develop clear and accessible future work selves might therefore be an important but hitherto relatively unexplored career-development intervention.

5 Chapter 5 – Exploring the role of FWS narratives

5.1 Introduction

5.1.1 Outline

In Chapter 4, I have explored the relationship between future work self (FWS) characteristics as rated by study participants themselves, and proactive career behaviours, as well as feedback seeking. In this chapter, I further explore the link between FWS and proactive goals, more specifically focusing on proactive skill development and networking as two types of proactive career behaviours. I investigate the narratives produced by study participants in more detail and use content analysis to explore their characteristics. I first describe the development of a coding system for future work selves and explore the relationship between the characteristics of the future work self narratives and the self-rated characteristics of future work selves. I then empirically investigate the relationship between the characteristics of the future work self narratives and proactive career behaviours aimed at bringing the imagined future about.

5.1.2 Theoretical background

5.1.2.1 Skill development and network building in postgraduate research students

Governments and private sector organizations see postsecondary education as a strategic tool ensuring competitiveness in knowledge-based societies relying on innovation (Craswell, 2007; McAlpine & Norton, 2006). However, postgraduate research graduates' readiness to enter the workplace has been criticized by industry leaders (Borthwick & Wissler, 2003); PhD programs (in this case in the UK) have been accused of being unable to prepare individuals adequately for careers in business or in academia (Roberts, 2002). As a consequence of these perceived shortcomings there is ongoing debate about the employability of postgraduate research graduates (R. Gilbert et al., 2004; McAlpine & Norton, 2006). The call for wider employment-related skills has led to initiatives to improve postgraduate research graduates' employability in the UK (e.g., Roberts, 2002; United Kingdom

Research Councils and the Arts and Humanities Research Board, 2001; Vitae, formerly the UK GRAD programme), in the US (e.g., Gaff et al., 2003), in Canada (e.g., Evers et al., 2003), and in Australia (e.g., Council of Australian Deans and Directors of Graduate Studies, 2005). Yet, the responsibility for the acquisition of skills and resources that will ensure future employability still largely lies with the student (Craswell, 2007; Metcalfe & Gray, 2005). Skill development initiatives rely on the individual student to identify and address skill gaps. In highly pressured situations dominated by an institutional focus on timely completion, postgraduate research students are forced to prioritise the use of scarce resources. FWS can be a helpful resource in the identification of future skill requirements and may also provide a motivational resource for proactive skill development.

Proactive skill development (Claes & Ruiz-Quintanilla, 1998; Penley & Gould, 1981) refers to initiatives and interventions that lead to mastery of the various tasks involved in one's occupation. In the case of a postgraduate research student these tasks might not be part of their current, but of their future job. Proactive skill development includes cumulating work experiences and increasing career-relevant knowledge, skills, and abilities, and some of these skills and abilities might not be instrumental to finishing a PhD. As argued above, they may also be effortful and time-consuming and be perceived as a distraction from the "core-task" of writing a dissertation.

Building networks is another competency postgraduate research students are required to develop during the duration of their doctoral program (United Kingdom Research Councils and the Arts and Humanities Research Board, 2001). As mentioned in Chapter 4, Defillippi and Arthur (1994) identify three career competencies that determine success in boundaryless careers – knowing why, knowing how, and knowing whom. "Know-whom competencies reflect career-relevant networks" (Defillippi & Arthur, 1994, p. 309). Networks can be used to pursue job opportunities and gather employment-relevant information. In interpersonal networks, individuals seek information, advice, and help. Proactive networking refers to individuals' proactive attempts to seek out interaction opportunities (Reichers, 1987). As for proactive skill development, FWS may provide a useful basis for mental simulation that can help identify future needs and make the usefulness of networks more salient.

5.1.2.2 FWS narratives and proactive goals

As argued in 1.2.1, proactive behaviour is intentional and goal-directed (Frese & Fay, 2001; Frese et al., 1997; Frese et al., 1996). Proactive goals are self-set goals that involve the creation of a future that is discrepant from the present and involve a long-term focus (Parker et al., forthcoming).

FWS provide an opportunity of envisioning the future that involves the self, and serve as a basis of mental simulation of future outcomes. If they perceive them as linked to their long-term goals, responsibilities, or aspirations, and ultimately to their values, individuals are likely to set and pursue proactive goals even though they may be costly and effortful and may not lead to immediate rewards.

In Chapter 4, I have shown that an accessible and important FWS can make the value of proactive behaviours more visible and protects individuals' ego from the potential threat involved. However, it remains yet to be shown that proactive goals are linked to the desire to bring about a hoped for FWS. In Chapter 4 I assessed proactive career behaviour via participants' self-ratings, and focused more broadly on an aggregate measure of four different proactive career behaviours, career planning, career consultation, proactive skill development, and networking.

In this chapter, I focus on two types of proactive career behaviours in postgraduate research students, proactive skill development and network building. I chose to focus on these two discrete proactive because they are highly relevant for postgraduate research students as argued above. In order to assess whether postgraduate research students were pursuing proactive goals, the goals participants set for themselves for bringing about their FWS were content-analysed and coded for skill development and networking. This approach provided a more implicit test of the link between FWS and proactive career behaviours.

In particular in career transitions, FWS can provide a sense of direction and facilitate the identification of what is required to bring about a desired future at work. Below I describe three aspects of future self narratives that relate to their usefulness as a basis for mental simulation and thus their influence on behaviour. The definition of these dimensions that formed the basis of the content analysis is described in more detail in the Method section of this chapter.

Elaboration refers to the richness of the future self narrative. Elaborate future selves provide information about the imagined future that enables individuals

to derive plans and check for their viability (Hayes-Roth & Hayes-Roth, 1979). Mental images of the future can be used to generate a plan for action and can help individuals to identify potential obstacles and plan for contingencies. Imagining future events also makes them seem more real and increases individuals' confidence that these events will actually occur (see Johnson & Sherman, 1990; or Koehler, 1991, for reviews). Mental simulation seems to increase motivation and emotional involvement as well as facilitate the generation of plans and problem-solving strategies (Taylor et al., 1998). More elaborate future selves will have a stronger influence on behaviour and provide a more effective basis for planning and the identification of potential obstacles.

H1a. The elaboration of the FWS narrative will be positively related to proactive skill development and networking.

Specificity. More specific future selves provide a more effective basis for the generation of plans and sub-goals and have a stronger motivational influence than more general, vague selves (Leondari et al., 1998). Evidence for a stronger effect of clear specific goals on behaviour comes from goal setting theory (Locke & Latham, 2002; Locke et al., 1981). Similarly, more specific future selves may serve as more useful standards against which the present can be compared (Carver & Scheier, 1990b), and are likely to provide a more useful higher-order goal from which proactive sub-goals can be derived.

H1b. The specificity of the FWS narrative will be positively related to proactive skill development and networking.

Uncertainty reflects the degree of doubt and insecurity about the future self. This dimension is similar to the distinction between expected and hoped for future selves. Markus and Nurius (1986) originally distinguished between the desirability of a possible self ("how probable the possible self was for them") and the likelihood of its attainment ("how much they would like the item to be true for them, p. 958) as two dimensions a single possible self could vary on. Oyserman and colleagues (Oyserman & Markus, 1990) initially distinguished between hoped for selves ("possible selves that you most hope to describe you") and expected selves

(“possible selves that are most likely to be true of you”, p. 115)³⁸. I argue that in order to constitute a future work self and to have any influence on behaviour, a possible selves needs to be at least considered possible. The degree to which a future self is considered likely to become reality will vary and will be reflected in the FWS narrative. Individuals with very uncertain future self narratives are not sure about what they would like their future to be. Highly uncertain FWS are unlikely to provide a clear mental image that can facilitate the identification of future requirements and serve as an incentive. They provide a less effective motivational resource for proactive behaviours. Highly certain future selves on the other hand are what the individual is convinced they will become. If this highly certain FWS is expected to become reality irrespective of one’s behaviour, it may also not provide an incentive for proactive behaviours aimed at bringing it about. The test of the relationship between uncertainty in the FWS narrative and proactive skill development and networking is thus exploratory.

5.1.2.3 FWS narratives and self-rated FWS characteristics

There are three self-rated characteristics of future work selves I focus on throughout this thesis which have been described in detail in 2.1.5 and 4.3.2.1:

- **Accessibility.** Future selves will have a stronger influence on behaviour, if they are accessible in an individual’s memory (Norman & Aron, 2003). Like other mental constructs, identities can become chronically accessible if we frequently think of them and use them (Bargh, 1982; Higgins et al., 1982; Srull & Wyer, 1986).
- **Exclusivity.** The self-concept is a collection of (potentially competing) identities (Markus & Wurf, 1987). A future work self can either be the only future work self at the core of an individual’s self-conception – an exclusive future work self, or it can be only one of a collection of similarly central future work selves the individual holds. More exclusive future work selves

³⁸ In her later work (Oyserman et al., 2006; Oyserman et al., 2004; Oyserman & Fryberg, 2006; Oyserman & Saltz, 1993; Oyserman et al., 2002), Daphna Oyserman no longer includes the distinction between hoped for and expected possible selves, but only contrasts expected selves with feared selves to estimate the degree of balance in possible selves.

will be activated more frequently in an individual's working memory, and are thus likely to have a stronger influence on behaviour.

- **Importance.** Importance refers to how motivated the individual is to achieve a future work self, to the degree of commitment to the future work self. Individuals who are committed to a specific identity want to make it an enduring part of who they are.

Self-rated characteristics of the future self and the characteristics of the future self narrative are considered to be independent aspects of future selves (L. A. King & Hicks, 2004, 2007; L. A. King & Smith, 2004). The self-rated characteristics of a FWS (its accessibility in the working memory, its dominance over other competing future selves, and its importance, i.e., the individual's motivation to attain it) may influence behaviour via different mechanisms than the characteristics of the future self narrative. As argued in Chapter 2, an accessible FWS is more likely to serve as a standard against which the present self can be compared (Carver & Scheier, 1990b). As argued above, an elaborate future self on the other hand may provide a more effective basis for mental simulation and thus may facilitate the generation of plans and problem-solving strategies (Taylor et al., 1998).

Below I describe how the three aspects of future self narratives discussed above in terms to their usefulness as a basis for mental simulation and thus their influence on behaviour, relate to self-rated characteristics of the FWS.

Elaboration. As described above, elaboration refers to the richness of the future self narrative. More elaborate future selves are likely to have a stronger influence on behaviour and provide a more effective basis for planning and the identification of potential obstacles.

King and Smith (2004) report non-significant correlations ($r < .14$, *n.s.*, $n = 107$) between the accessibility of two types of possible selves and a composite measure of elaboration, a mean score of coder ratings of elaboration, vividness, emotionality, and detail. A highly accessible future self is a self the individual often thinks about. Highly accessible future selves are not necessarily more elaborate, i.e., more richly described. A postgraduate research student may often think about her hoped for future self as a lecturer without considering the nuances of what this future would entail in much detail. On the other hand, elaborate future selves are not necessarily chronically accessible in an individual's working memory. As mentioned

in 2.1.5.4, individuals can construct elaborate descriptions of their future life without having thought about it very much beforehand (L. A. King & Raspin, 2004). A postgraduate research student may not frequently think about her future work self as an entrepreneur, but may be able to produce and narrate an elaborate image of what her future would be like. Accessibility, importance and exclusivity of future selves are distinct dimensions from the characteristics of the future self narrative.

However, a more central identity or core conception (Gergen, 1965) is generally also most well elaborated (Markus & Wurf, 1987). The more an individual thinks about her future work self, the more likely she is to develop and elaborate future work self narrative.

Similarly, a future work self that is important to the individual, i.e. that she is motivated to achieve, and that is exclusive and does not compete with alternative future work selves, is also likely to be more elaborate. Thus, I propose:

H2a. The accessibility of the FWS in the memory will be positively related to the elaboration of the FWS narrative.

H2b. The importance of the FWS will be positively related to the elaboration of the FWS narrative.

H2c. The exclusivity of the FWS will be negatively related to the elaboration of the FWS narrative.

Specificity. While the self-rated FWS characteristics are likely to be reflected in the elaboration and uncertainty of FWS narratives, the relationship with specificity is less clear. For example, an individual may have a highly accessible FWS that involves working in the public sector she is very committed to. However, she may not have formed concrete ideas of what “working in the public sector” would imply, and may not have thought about where she would be working and what exactly her future self would be doing. On the other hand, someone may have a very specific idea of her FWS that would entail staying on in the department as a research associate and have concrete ideas about what this future would look like, but may however hardly ever think about this FWS, only consider it one of many possibilities, and not be strongly committed to bringing this future about. Thus, I do not expect the specificity of the FWS narrative to be related to the self-rated characteristics of the FWS.

Uncertainty reflects the degree of insecurity about the future self. Less uncertain FWS are likely to be more accessible in the memory. FWS narratives the individual has not thought about much beforehand are likely to be more uncertain than ones that have been on an individual's mind for a long time and are readily accessible in the memory.

Individuals commit to goals that are highly desirable, but also feasible (e.g., Bandura, 1997; Heckhausen, 1991; Oettingen, 1999). It is unlikely for an individual to be highly committed to a FWS they do not consider attainable. More important FWS are thus likely to be less uncertain.

I also argue that it is unlikely to have a highly exclusive FWS, i.e., not be able to imagine other paths for oneself in the future, and a very uncertain FWS narrative. Individuals with an exclusive FWS and a highly uncertain FWS narrative would not be able to imagine a clear future for themselves they consider likely to become reality, but would also not be able to imagine any alternative future paths for themselves. In summary, I propose:

H3a. The accessibility of the FWS in the memory will be negatively related to the uncertainty of the FWS narrative.

H3b. The importance of the FWS will be negatively related to the uncertainty of the FWS narrative.

H3c. The exclusivity of the FWS will be negatively related to the uncertainty of the FWS narrative.

5.1.2.4 FWS narratives and career identity and future orientation

In Chapter 4, I have explored the relationship between the FWS and individuals' career identity and future orientation. The accessibility and importance of the FWS were significantly related to career identity ($r = .30, p < .001$, and $r = .43, p < .001$, respectively) and future orientation ($r = .30, p < .001$, and $r = .47, p < .001$, respectively) as expected. Similarly, the characteristics of the FWS narrative are likely to be related to both career identity and future orientation). Career identity is the degree of centrality one's career has for one's self, and is likely to render career-related identities in the working self-concept more accessible. A strong career identity will imply that an individual is more concerned with her professional future and spends more time thinking about her FWS. As a result, the FWS of highly

career-oriented individuals is likely to be more elaborate, less uncertain, and more specific.

Future orientation is likely to have a reciprocal relationship with the FWS. Inducing a more distant future time perspective is one of the mechanisms through which FWS motivate proactive career behaviours (Meara et al., 1995). A strong disposition to focus on future rather than immediate outcomes (Strathman et al., 1994) will make it more likely for individuals to contemplate their possible future and work. In sum, I propose:

H4a: Career identity will be positively associated with the elaboration and specificity, and negatively associated with the uncertainty of the FWS narrative.

H4b: Future orientation will be positively associated with the elaboration and specificity, and negatively associated with the uncertainty of the FWS narrative.

5.2 Method

5.2.1 Pilot studies

Individuals' hoped for future selves often include occupational or career aspects of their imagined future (see e.g., in L. A. King, 2001, p. 803). Other researchers have focused exclusively on vocational future selves (e.g., Krieshok et al., 1999). In addition, previous research suggests that individuals are capable of constructing a future self narrative when instructed to do so, even if they have not thought much about their future self beforehand (L. A. King & Raspin, 2004). I thus expected that study participants would be able to describe their future work self, and that future work self narratives would vary in their qualities. The material used to collect participants' future work selves was piloted in two small pilot studies. Participants were asked to mentally travel into the future, imagine their ideal future work life, and write a description of what they imagined. I adapted an instruction from King, who used a similar instruction to collect participants' "best possible self" (L. A. King, 2001, p. 800), and from Cross and Markus' (1991) Possible Self Questionnaire. I first piloted this instruction in a group of 6 MSc- and postgraduate research students as part of a career development workshop. Workshop participants were presented with an example of a FWS and the instruction shown above. They were asked to write descriptions of their own FWS and to locate their future self on a

time line. In addition, they were asked to identify at least five concrete goals they were aiming to achieve within the next 12 months in order to bring their hoped for FWS about. An example of a future work self produced in the work shop is shown below:

"I have a lovely cottage in the countryside in the South, with a loving husband and two children. I work part time to be able to enjoy my children and spend quality time with them while they are still young. I am a good mother to my children. My husband looks after the children when I'm at work. I have a very successful career in London, as principal occupational psychologist for a top consultancy. I am admired by my work colleagues and often asked to mentor individuals. I attend conferences all over the world giving presentations, and am recognized as a highly successful individual. Whilst working for organisations, I still have a hand in academic work. I earn enough money to live a comfortable live, provide my children with what they need (without being spoilt) and afford nice holidays. I see lots of my friends and family." Workshop participant

An example of a goal associated with the above future work self is "*attend conferences to broaden my contacts & networks*". Based on workshop participants' feedback, I further adapted the instruction for clarity. The final instruction used in all consecutive studies is shown below:

"We all think about the future to some extent, and we imagine what we could become. We would like to ask you to imagine the future of your work life. Imagine you could travel in time. You travel to the future and can take a look at your future self. Try to go as far ahead into the future as possible, so that you still have a clear image. Imagine what you have hoped for for your future work life has become true. Keep the image in mind. What does your future work self do? What is your future work self like? Please write below in at least 50 words what you imagine."

To establish whether participants' FWS could also be collected in a web-survey, I conducted a second pilot study in which postgraduate research students in the psychology department of a large university in the North of England were invited via email to participate in an on-line questionnaire. Study participants were between

21 and 35 years old and mostly female full-time students (87% and 91.3%, respectively). 23 future work self narratives with an average of 69 words ($\sigma = 34.65$) were collected as part of this pilot study.

5.2.2 Sample and procedure

Data were collected in a web-survey among graduate students at a large university in England as described in detail in sections 3.3.1 and 3.4.2 above.

Material. *Future work self narratives.* Participants were asked to mentally travel into the future and imagine their ideal FWS, using the instruction developed in the pilot study as described above. They provided a description of what they imagined filling in a text box. 285 future work self narratives with an average of 58 words ($\sigma = 38.66$) were collected.

Goals for attaining the future work self. Participants then provided up to three goals they were currently pursuing in order to attain their future work self, also using a text box. A total of 809 goals were provided.

Measures. The scales used, their measurement characteristics and their divergent validity were described in more detail in Chapter 4, and are only briefly outlined below.

Accessibility of the future work self (FWS) ($\alpha = .78$). Based on their experience of writing the future self narrative, participants rated the mental clarity, accessibility and availability of the scenario they imagined. The three items were adapted from King and Smith's (2004) measure of salience of possible selves, one of which was omitted following a confirmatory factor analysis (see 4.4.1).

Importance of the FWS ($\alpha = .84$). Three items were adapted from Norman and Aron's (2003) measure of the motivation to achieve a hoped for future self to assess the perceived importance of the FWS.

Exclusivity of the FWS ($\alpha = .84$). The exclusivity of the FWS, i.e. the centrality of the specific future work self described in the narrative in relation to alternative FWS was assessed with three items.

Career identity ($\alpha = .84$). 4 items measuring career identity were adapted from Carson & Bedeian's career commitment scale (Carson & Bedeian, 1994).

Future orientation ($\alpha = .78$). Future orientation was assessed with three items from the consideration of future consequences scale by Strathman and colleagues (Strathman et al., 1994).

Skill development ($\alpha = .75$) and *networking* ($\alpha = .84$) were each assessed with three items each from Penley and Gould (1981) which were adapted slightly to suit the context. For example, the original item “I have developed more knowledge and skill in tasks critical to my work unit’s operation” was changed to “I develop knowledge and skill in tasks critical to my future work life”. An example item assessing networking that was altered slightly is “I am building a network of contacts or friendships to provide me with help or advice that will further my work chances”. The respective original item from Penley and Gould (1981) was “I have built a network of contacts or friendships with co-workers or other people to provide me with help or advice that will further my work chances”.

Two further variables were not included in the hypotheses but were used to explore post-hoc hypotheses (see 5.4).

Neuroticism (also referred to as emotional stability or emotional adjustment) was assessed with 4 items from the Mini-IPIP scale (Donnellan, Oswald, Baird, & Lucas, 2006), a 20-item short form of the 50-item International Personality Item Pool—Five-Factor Model measure (Goldberg, 1999).

Positive and negative affect were assessed with a 10-item short form of the PANAS, the Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988), developed by Thompson (2007).

5.2.3 Content analyses of the FWS

5.2.3.1 Development of the coding and rating instructions

Two occupational psychology graduates were recruited and trained as raters. Data from the pilot study was used to train the raters. They independently worked through a code book with detailed descriptions of the dimensions and themes, and demonstrations.

- **Elaboration**³⁹ refers to the richness of the FWS narrative. Narratives were coded as high in elaboration if they covered a variety of different aspects of the future self in great detail. This dimension goes beyond how detailed the future self is, with future self narratives containing information on more different aspects of the future – such as the type of job the future self will have, or the type of person the future self will be – being rated as more elaborate.
- **Specificity** of the future self reflects the degree to which the FWS reflects a concrete professional future. Unspecific future self narratives only contain vague ideas of the future self and do not necessarily imply an identifiable profession. Highly specific future selves contain a concrete image of the participants' professional future.
- **Uncertainty** reflects the degree of doubt and insecurity about the FWS. Participants with very uncertain FWS narratives are not sure about what they would like their future to be. Moderately uncertain FWS narratives contain some image of what participants would like their future self to be, but express uncertainty about this future becoming reality. Highly certain future selves on the other hand are what the individual is convinced they will become.

A copy of the code book can found in the Appendix. The coders also worked through a series of on-line example ratings which they received feedback on. Two screenshots from the on-line tutorial are shown below.

³⁹ Note that this dimension is referred to as “detail” in the coding instructions provided to the raters.

FWS ratings

Progress indicator:



Here are some practice ratings for detail. Please rate them, you will then on the next page see whether you have rated them correctly.

I will be a hard working and dedicated scientist, perhaps working for an environmental organisation or university. I will feel secure in my own knowledge and abilities, confident with talking about it, and hopefully enjoying what I do. I will not be particularly famous or extravagantly paid but perhaps respected and comfortable. My job would involve doing something worthwhile, that helps the natural world in some way, with a great deal of outside work and some travelling and would also satisfy my ideals.

- Very detailed (many different aspects covered, frequently more than one detail in a category)
- Fairly detailed (some aspects covered, one or two with more than one detail)
- Moderately detailed (some aspects covered, none with more than one detail)
- Not very detailed (only one or two details)
- Not detailed at all (only one single piece of information)
- Not applicable

FWS ratings

Progress indicator:



Feedback on the practice ratings of DETAIL.

So, how did it go? Here is how the practice examples should have been rated:

"I will be a hard working and dedicated scientist, perhaps working for an environmental organisation or university. I will feel secure in my own knowledge and abilities, confident with talking about it, and hopefully enjoying what I do. I will not be particularly famous or extravagantly paid but perhaps respected and comfortable. My job would involve doing something worthwhile, that helps the natural world in some way, with a great deal of outside work and some travelling and would also satisfy my ideals."

This is rated as 5 - very detailed. Many different aspects are covered: the types activities ("*great deal of outside work and some travelling*", "*scientist, perhaps working for an environmental organisation or university*", "*I will feel secure in my own knowledge and abilities, confident with talking about it*"), what the future self would be like ("*hard working and dedicated*", "*I will feel secure in my own knowledge and abilities, confident with talking about it*") and feel like ("*enjoying what I do*", "*comfortable*"), the success of the future self ("*not be particularly famous or extravagantly paid but perhaps respected*") and the meaning of the job ("*doing something worthwhile, that helps the natural world in some way*", "*also satisfy my ideals*").

Figure 6. On-line tutorial for rater training

Following the procedures recommended Lombard and colleagues (Lombard, Snyder-Duch, & Campanella Bracken, 2002, 2003), a random sample of 30 future work self narratives was then independently rated by both raters. Raters were blind to participants' demographics, subject area, and self-rated characteristics of the FWS like accessibility or importance. The resulting interrater-reliabilities are shown in Table 5.1.

As proposed by Hayes & Krippendorff (2007), Krippendorff's Alpha was used as a measure of interrater reliability (Krippendorff, 1970, 2004). As opposed to many other measures of interrater reliability, Krippendorff's Alpha reliability accounts for chance agreement and calculates disagreements instead of correcting percentage agreements (see e.g. Hayes & Krippendorff, 2007, or Lombard et al.,

2002, 2003, for a discussion of different indices of interrater reliability). There is general agreement that interrater reliability indices accounting for chance agreement are “too conservative” (Lombard et al., 2002, p. 593). Following the recommendations of Krippendorff (2004), a reliability of .70 will be considered acceptable for Krippendorff’s Alpha.

Table 5.1.
Interrater reliabilities of a random sample of 30 future selves

	Krippendorff’s Alpha
FWS: Elaboration	.84
FWS: Uncertainty	.91
FWS: Specificity	.63

The coding instructions for the elaboration and uncertainty of the future work self narratives were left unchanged after satisfactory interrater reliabilities of above .70 (Krippendorff, 2004) were reached. After discussing the coding instructions and disagreements on their interpretation with the raters, the instructions for specificity of the FWS narratives were refined. Ratings of the random sample of 30 future selves were omitted from the final data set. The two raters then independently rated a further random sample of 93 future self narratives using the modified coding instructions. The resulting interrater reliabilities are shown in Table 5.2.

Table 5.2.
Interrater reliabilities of random sample of 93 future selves

	Krippendorff’s Alpha
FWS: Elaboration	.82
FWS: Uncertainty	.51
FWS: Specificity	.74 ^{**}

^{**} Coding based on modified coding instructions

The modified coding instructions resulted in acceptable interrater agreement. However, interrater reliability on the dimension of uncertainty was now considerably lower. I explored the FWS narratives where the raters did not agree on the ratings of uncertainty and detected systematic disagreement in the interpretation of the coding instructions. For example, the framing of the narrative (e.g., “I imagine”, “I see myself”) was interpreted as expressing uncertainty by one of the raters. The raters then received detailed feedback on their ratings. The coding instructions were however not changed.

Finally, the remaining 162 future self narratives were independently rated by both raters in terms of their detail, specificity, and uncertainty. Table 5.3 shows the resulting interrater reliabilities.

Table 5.3.
Interrater reliabilities of remaining 162 future selves

	Krippendorff's Alpha
FWS: Elaboration	.87
FWS: Uncertainty	.78
FWS: Specificity	.90

Overall, the interrater agreement was sufficient to justify averaging the two ratings (see Table 5.4 for interrater reliabilities for the final sample). After excluding ratings from the first randomly selected narratives which served as a basis of further modification of the coding instructions, the two ratings were averaged over raters for each dimension.

Table 5.4.
Interrater reliabilities of the final sample

	Krippendorff's Alpha
FWS: Elaboration	.86 (N = 254)
FWS: Uncertainty	.69 (N = 254)
FWS: Specificity	.86 (N = 255)

5.2.4 Content analyses of the goals to attain the FWS

In addition to writing a description of their hoped for future self, participants also provided up to three goals they were currently pursuing in order to attain their FWS. The raters were provided with detailed descriptions of the two proactive career behaviours and examples from the pilot data.

Raters received detailed descriptions of the two themes and examples taken from the pilot data. Again following the procedures recommended Lombard and colleagues (Lombard et al., 2002, 2003), they then independently rated the goals associated with a random selection of 30 future self narratives. They were blind to participants' future self narrative, their demographics, subject area, and the self-rated characteristics of the FWS like accessibility or importance. The resulting interrater-reliabilities are shown in Table 5.5.

Table 5.5.
Interrater reliabilities for goals aimed at bringing about the FWS (random sample of 30 narratives)

	Krippendorff's Alpha
Goals: Networking	.92
Goals: Skill development	.91

Another sample of goals associated with a random selection of 93 future self narratives was then rated by both raters. Based on the satisfactory high interrater agreement (Krippendorff's Alpha was .92 for networking, .77 for skill development), the goals associated with the remaining 162 future selves were distributed among the two raters.

5.3 Results

The means, standard deviations, and zero-order correlations among the study variables are shown in Table 5.6. As expected, elaboration of the FWS narrative was positively related to the length of the narrative ($r = .60, p < .001$). Similarly, King and Raspin (2004) found correlations of around .70 between the length of the future self narrative and their content analytic measure of elaboration. However, more elaborate FWS were also associated with a stronger career identity ($r = .16, p < .05$), while the length of the FWS narrative was not significantly related to career identity ($r = .08, n.s.$). Age and the year of study were negatively related to the elaboration of the FWS narrative ($r = -.15$ and $r = -.18$, respectively), indicating that younger participants and participants who were less advanced in their studies provided more elaborate narratives. Elaborate FWS narratives were also more specific ($r = .47, p < .001$) and less uncertain ($r = -.17, p < .01$), while there was no significant relationship between the specificity of a future work self, and its uncertainty ($r = -.11, n.s.$).

Networking self-ratings were significantly related to the mention of networking goals ($r = .30, p < .01$). Proactive skill development self-ratings however were not significantly related to the mention of skill development goals ($r = .04, n.s.$).

Table 5.6.

Means, standard deviations and correlations among dimensions of FWS narratives and other study variables

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Age	30.38 (8.12)																
2. Gender	1.58 (.49)	.05															
3. Year of study	2.65 (1.35)	.19**	-.07														
4. Elaboration of FWS narrative	3.09 (0.96)	-.16*	.08	-.19**													
5. Uncertainty of FWS narrative	1.73 (0.87)	-.04	-.13*	-.03	-.18**												
6. Specificity of FWS narrative	3.37 (0.88)	-.04	.01	-.04	.47***	-.11											
7. Avoidance in FWS narrative	0.26 (0.44)	-.06	.05	-.01	.15*	-.05	-.06										
8. Length of FWS narrative	58.15 (38.66)	-.10	.03	-.13*	.60***	.12	.22***	.28***									
9. Accessibility of FWS	3.35 (1.06)	.16**	.12*	-.04	.16**	-.38***	.13*	.02	.10								
10. Importance of FWS	3.70 (.80)	.05	.07	.08	.13*	-.22**	.07	-.00	.08	.45***							
11. Exclusivity of FWS	2.72 (.92)	.00	.04	.01	.05	-.01	.04	.04	-.01	.01	.18**						
12. Career identity	3.69 (.87)	.06	.06	-.09	.16*	-.07	.22**	-.10	.03	.32***	.45***	-.01					
13. Future orientation	3.39 (.81)	-.06	.01	-.13*	.11	-.10	.08	.03	.07	.31***	.48***	.01	.31***				
14. Skill development goals	.40 (.49)	-.20**	.02	-.16*	.25***	-.04	.19**	-.10	.09	-.01	.00	.01	.00	.01			
15. Networking goals	.32 (.47)	-.09	.07	-.09	.22**	-.03	.10	.01	.18**	.04	.09	-.05	.05	.12	.04		
16. Skill development	3.77 (.67)	-.06	.02	-.01	.09	-.06	.11	-.05	.05	.28***	.23***	-.15**	.29***	.28***	.04	.01	
17. Networking	3.47 (.86)	-.07	.17**	-.14*	.15*	-.05	.12	.00	.04	.20***	.25***	-.09	.31***	.29***	.03	.30**	.30**

*p < .05, **p < .01, ***p < .001

Hypotheses 1a and 1b postulated a significant positive relationship between the elaboration and specificity of the FWS narrative, and proactive skill development and networking. I first tested the relationship of the characteristics of the FWS narrative with self-rated skill development and networking.

The elaboration of the FWS narrative was significantly correlated with self-rated networking ($r = .15, p < .05$), but not with self-rated skill development ($r = .09, n.s.$); the specificity of the FWS was not significantly related to either networking ($r = .12, n.s.$) or skill development ($r = .11, n.s.$), respectively. To test these relationships in combination with other variables in the study, I conducted hierarchical regression analyses predicting proactive skill development and networking. Due to the relatively high correlation between the length and the elaboration of the FWS narrative ($r = .60, p < .001$), I first tested for multicollinearity. Tolerance values indicate the degree of variance in an independent variable independent of other independent variables. The common cut-off thresholds are generally < 0.1 (e.g., Cohen, Cohen, West, & Aiken, 2003; Hair, Anderson, Tatham, & Black, 1998), with some authors suggesting tolerance values smaller than 0.2 as an indicator for multicollinearity (Menard, 1995). The variance inflation index (VIF) estimates the extent to which “the variance of each regression coefficient is increased relative to a situation in which all of the predictor variables are uncorrelated” (Cohen et al., 2003, p. 423). Values above 10 are generally assumed to indicate the presence of multicollinearity (e.g., Cohen et al., 2003; Hair et al., 1998). Tolerance values were .47 for the elaboration of the FWS narrative, and .58 for its length, which is below the common cut-off point. The VIF were also below the cut-off criterion indicating the presence of multicollinearity (2.11 for elaboration, and 1.72 for length).

Thus, I proceeded to conduct hierarchical regression analyses. Age, gender, and year of study were entered as control variables in Step 1. In Step 2, I entered career identity and future orientation; accessibility, importance and exclusivity of the FWS were entered in Step 3, before length, elaboration, specificity, and uncertainty of the FWS narrative were entered in Step 4. The results are shown in Table 5.7 and Table 5.8. Hypothesis 1a and 1b could thus not be supported for the self-ratings of proactive skill development and networking.

Table 5.7.
Hierarchical regression analyses predicting self-rated proactive skill development

	Step 1	Step 2	Step 3	Step 4
	β			
Step 1:				
Age	-.08	-.05	-.07	-.07
Gender	.03	.04	.04	.05
Year of study	-.05	-.01	.02	.02
Step 2:				
Career identity		.17*	.16*	.14
Future orientation		.22**	.20**	.21**
Step 3:				
Accessibility of FWS			.18*	.19*
Importance of FWS			-.03	-.02
Exclusivity of FWS			-.15*	-.15*
Step 4:				
Length of FWS narrative				-.03
Elaboration of FWS narrative				.02
Specificity of FWS narrative				.09
Uncertainty of FWS narrative				.08
Adjusted R ²	-.00	.08	.12	.11
ΔR^2 Step		.09***	.05*	.01 (n.s.)
F	.78	4.85***	4.54***	3.27***

*p <.05, **p <.01, ***p <.001

Table 5.8.
Hierarchical regression analyses predicting self-rated networking

	Step 1	Step 2	Step 3	Step 4
	β			
Step 1:				
Age	-.11	-.09	-.10	-.08
Gender	.06	.08	.08	.07
Year of study	-.15*	-.12	-.12	-.11
Step 2:				
Career identity		.16*	.14*	.12
Future orientation		.28**	.15*	.16*
Step 3:				
Accessibility of FWS			.05	.06
Importance of FWS			-.07	.07
Exclusivity of FWS			-.05	-.07
Step 4:				
Length of FWS narrative				-.09
Elaboration of FWS narrative				.12
Specificity of FWS narrative				.07
Uncertainty of FWS narrative				.06
Adjusted R ²	.04	.10	.09	.10
ΔR^2 Step		.07***	.01 (n.s.)	.02 (n.s.)
F	3.55*	5.60***	3.73***	2.85**

*p <.05, **p <.01, ***p <.001

I then tested the relationship between the FWS characteristics and the presence of proactive career behaviours in the goals participants were pursuing to bring about their desired future.

39.8% of participants mentioned the development of skills, abilities and knowledge as at least one of the goals they were currently pursuing in order to bring about their desired future self; 31.9% mentioned networking as at least one of their

goals, providing some initial support for the importance of the future self in the motivation of proactive career behaviours.

Proactive skill development in the goals was positively correlated with both the elaboration ($r = .25, p < .001$) and the specificity of the FWS narrative, respectively ($r = .19, p < .01$). The relationship with the uncertainty of the FWS was not significant ($r = -.04, n.s.$). Networking in the goals was correlated with elaboration ($r = .22, p < .01$), but not with the specificity ($r = .10, n.s.$) or uncertainty ($r = -.03, n.s.$) of the FWS narrative. The zero-order correlations provided some initial support for Hypothesis 1a, but not 1b. The relationship between the characteristics of the FWS and the mention of proactive skill development and networking in the goals was then tested using logistic regression analyses. As above, age, gender, and year of study were entered as control variables in Step 1. In Step 2, career identity and future orientation were entered; accessibility, importance and exclusivity of the FWS were entered in Step 3, before I entered the length, elaboration, specificity, and uncertainty of the FWS narrative in Step 4.

Table 5.9.
Logistic regression analysis predicting the skill development goals

	Step 1	Step 2	Step 3	Step 4
	<i>b</i>			
Step 1:				
Age	-.06**	-.06**	-.06	-.06
Gender	.26	.23	.23	.16
Year of study	-.16	-.21	-.24	-.21
Step 2:				
Career identity		-.23	-.27	-.39
Future orientation		.24	-.30	-.23
Step 3:				
Accessibility of FWS			-.11	-.18
Importance of FWS			.26	.24
Exclusivity of FWS			.05	-.05
Step 4:				
Length of FWS narrative				-.01
Elaboration of FWS narrative				.72**
Specificity of FWS narrative				.17
Uncertainty of FWS narrative				.10
Model Chi-square	13.22**	3.91	1.19	13.19**
-2 log likelihood chi-square	275.83	271.92	270.73	257.49

Note. Skill development was coded as 0 = no mention of skill development, 1 = skill development as at least one goal. For the final model, the Nagelkerke R^2 was .19. The percentage of correct predictions for the final model was 67.5%. *b* = logistic regression coefficient. * $p < .05$, ** $p < .01$, *** $p < .001$

Elaboration of the FWS narrative was positively related to the mention of skill development in the goals ($b = .72, p < .001$) after controlling for age, gender, year of study, and the length of the FWS narrative, as well as career identity, future orientation and the self-rated characteristics of the FWS.

The relationship between elaboration and the mention of networking as a goal was near significant ($b = .47, p = .05$). Thus, Hypothesis 1a was partially supported. Hypothesis 1b was not supported, since neither skill development ($b = .17, n.s.$) nor networking ($b = -.02, n.s.$) had a significant relationship with the specificity of the FWS narrative.

Table 5.10.
Logistic regression analysis predicting networking goals

	Step 1	Step 2	Step 3	Step 4
	<i>b</i>			
Step 1:				
Age	.02	-.03	-.03	-.02
Gender	.30	.34	.36	.31
Year of study	-.06	-.04	-.04	.00
Step 2:				
Career identity		-.10	-.14	-.10
Future orientation		.39	.33	.41
Step 3:				
Accessibility of FWS			.06	.01
Importance of FWS			.16	.12
Exclusivity of FWS			-.15	-.19
Step 4:				
Length of FWS narrative				.00
Elaboration of FWS narrative				.47*
Specificity of FWS narrative				-.02
Uncertainty of FWS narrative				.09
Model Chi-square	3.58	3.69	1.10	8.90
-2 log likelihood chi-square	270.27	266.57	265.47	256.58

Note. Skill development was coded as 0 = no mention of networking, 1 = networking in at least one goal. For the final model, the Nagelkerke R^2 was .11. The percentage of correct predictions for the final model was 66.7%. b = logistic regression coefficient. * $p < .05$, ** $p < .01$, *** $p < .001$; † $p = .05$

The test of the relationship between the uncertainty of the FWS narrative and the proactive career behaviours networking and skill development was exploratory. Both the univariate relationships ($r = -.04, n.s.$, for skill development, and $r = -.03, n.s.$, for networking, respectively) and multivariate relationships ($b = .10, n.s.$, for proactive skill development, and $b = .09, n.s.$, for networking, respectively) were not significant.

I then tested the relationship between the characteristics of the FWS narrative, and the self-rated characteristics of the FWS. As predicted, the elaboration of the FWS narrative was positively related to the accessibility of the FWS in the memory ($r = .16, p < .01$), and the importance of the FWS ($r = .13, p < .01$), supporting Hypotheses 2a and 2b. The exclusivity of the FWS however was not related to the elaboration of the FWS narrative ($r = .05, n.s.$); thus, Hypothesis 2c was not supported.

Uncertainty in the FWS narrative was negatively related to the accessibility ($r = -.38, p < .001$) and importance of the FWS ($r = -.22, p < .01$), providing support for Hypotheses 3a and 3b. The relationship with the exclusivity of the FWS was not significant ($r = -.01, n.s.$), failing to support Hypothesis 3c.

The exploratory test of the relationship between the specificity of the FWS narrative and the self-rated characteristics showed a significant positive relationship with the accessibility of the FWS ($r = .13, p < .05$), while the relationship with importance ($r = .07, n.s.$) and exclusivity ($r = .04, n.s.$) was non-significant.

Hypotheses 4a and 4b proposed significant relationships between career identity and future orientation, and the characteristics of the FWS narratives. Career identity was significantly related to the elaboration of the FWS narrative ($r = .16, p < .05$) and its specificity ($r = .22, p < .01$) as expected. The relationship with uncertainty was not significant ($r = -.07, n.s.$). Hypothesis 4a was thus partially supported. Contrary to my expectations, future orientation was not significantly related to the characteristics of the FWS narrative ($r = .10, n.s.$, for elaboration; $r = -.11, n.s.$, for uncertainty, and $r = .08, n.s.$, for specificity, respectively), failing to support Hypothesis 5b.

5.4 Discussion

In Chapter 4, I have demonstrated an indirect link between the self-rated characteristics of the future work self, and proactive behaviour. Individuals who had a clear image of what they would like their future to be and felt strongly committed to this future saw a higher value in instrumental feedback to improve their performance and were less worried about the possible negative effect of critical feedback to their ego. Those who could only see one possible future for themselves were less motivated to actively shape their career and anticipate future skill requirements; and they were less motivated to seek feedback which could help improve their skills and performance. These effects however concerned the perception of the FWS, its accessibility in the individual's memory, its perceived importance, and its perceived relation to alternative futures.

In this chapter, I have explored whether the self-rated characteristics of the FWS are reflected in the characteristics of the FWS narratives and whether FWS

narratives make a unique contribution to our understanding of the motivation of proactive behaviour. Is it enough to be able to imagine a positive future for oneself or does this image have to have certain qualities in order to provide a useful basis for behaviour aimed at bringing it about?

FWS that were more easily accessible in individuals' working memory were also more elaborate, less uncertain, and more specific. Clearer, more easily accessible FWS were translated into more certain, specific and elaborate descriptions of the hoped for future, which attests to the validity of both the self-rating scale and the coding system developed for the FWS narratives.

The motivation to attain a FWS was also positively associated with more elaborate and less uncertain FWS narratives. The more important a desired future was to an individual, the more certainty about this future becoming reality was reflected in the FWS narrative. However, more important FWS were not necessarily associated with more specific FWS narratives, suggesting that even less concrete images of a hoped for future can be highly desirable goals.

The exclusivity of the FWS was not related to any of the characteristics of the FWS narrative, providing further support for the idea discussed in 4.5 that this dimension of the FWS is more likely to reflect a degree of hopelessness and pessimism about the future. Indeed, exclusivity of the FWS was positively related to neuroticism ($r = .16, p < .01$) and negative affect ($r = .14, p < .05$), and negatively related to positive affect ($r = -.19, p < .01$). These correlations are however based on cross-sectional single source data. Further research adopting a longitudinal design is needed to shed light on the relationship between affect, and the exclusivity of the FWS.

The positive relationship between career identity and the elaboration and specificity of the FWS narrative seems to provide further support for the idea that the degree of centrality of individuals' career to their identity makes more specific career-related identities such as the future self more salient and enables individuals to develop more concrete, vivid images of their future careers.

Individuals' future orientation was however not significantly related to the characteristics of the FWS narrative. This may be because the consideration of future consequences scale by Strathman and colleagues (1994) has a strong behavioural focus. Rather than capturing the degree to which individuals more generally focus on

the future rather than the present, it focuses on the degree to which future outcomes influences individuals' day-to-day behaviour⁴⁰. Future orientation, the tendency to focus on and value the future is likely to influence how far into the future the self can be projected (Leondari, 2007). Future orientation as operationalized in the present study may well be more likely to act as a moderator between images of the future and behaviour aimed at bringing it about.

In addition to exploring the relationship between FWS narratives and the self-rated characteristics of the FWS as well as broader concepts of career identity and future orientation, the aim of this chapter was also to provide a more direct test of the relationship between the future work self, and proactive behaviours aimed at bringing it about. The prevalence of the proactive career behaviours skill development and networking in the goals aimed at bringing about one's desired FWS provided some initial support for the role of future selves in the motivation of proactive career behaviours.

Networking self-ratings were significantly related to the mention of networking as a goal. However, proactive skill development self-ratings were not significantly related to the mention of skill development as a goal. This may be because the rating scale focuses explicitly on skills that will be required in the future rather than in the present. In identifying the mention of the development of skills and knowledge in the goals listed by participants, my coding guide on the other hand did not distinguish between skills that may be useful now and skills that will only be useful in future jobs. Future research may distinguish between the acquisition of skills that are useful only in future positions and of limited use in the present job, and skills that may also be useful in one's current role.

Importantly, there was preliminary evidence for a link between FWS narratives and proactive goals. More elaborate FWS narratives were more frequently associated with proactive career behaviours aimed at bringing them about after accounting for the length of the FWS narrative as well as demographic control variables and the self-rated characteristics of the FWS, supporting the idea that richer

⁴⁰ An example item is shown in Chapter 4 (4.3.2). Other items are "Often I engage in a particular behavior in order to achieve outcomes that may not result for many years" and "The decisions I make today are based on what I think might happen in the future".

future selves provide a more effective basis for mental simulation and have a stronger motivational effect.

However, the characteristics of the FWS narrative did not significantly relate to self-rated proactive career behaviour, once other variables had been taken into account. One of the possible reasons for the lack of support for this relationship has been discussed above. Individuals may not make a clear distinction between skills required in the future and skills that enable them to perform the task at hand. Some support for the idea that more elaborate FWS narratives may be associated with higher performance in the present job comes from the supervisor ratings of performance obtained for a subsample of students⁴¹. After completing the web-survey, students were given the option to invite their supervisor to participate in the study and email them a unique web-link that would make it possible to link the two data sets while insuring anonymity for both students and supervisors. This set-up made it impossible to determine the number of supervisors who were invited by their students to participate in the study. However, for a small subsample of students (N=39) supervisor ratings of their task performance and of their broader performance in relation to their peers were obtained. The elaboration of the FWS narrative was significantly related to supervisor-ratings of overall performance ($r = .35, p < .05$), but not of narrow task performance ($r = .18, n.s.$), after controlling for students' conscientiousness. These findings provide initial support for the idea that a more elaborate image of the FWS may also enhance performance in one's present job. On the other hand, students who are performing well may form more elaborate (and possibly more ambitious) images of what their professional future could be. Alternatively, positive future selves may be recruited as a compensatory mechanism

⁴¹ Task performance ($\alpha = .88$) was assessed with 4 items capturing the degree to which a student was meeting performance expectations and fulfilling requirements. An example item is "My student performs the tasks expected as part of a PhD".

Overall performance ($\alpha = .94$) was assessed with 7 items adapted from Pearce and Porter (1986; see also Ashford & Black, 1996). Supervisors were asked to rate their student relative to other students in the field on a percentage basis in terms of their overall academic performance, their ability to get along with others, their quality (not quantity) of performance, their ability to get tasks done in time, their achievement of work goals, their level of innovation, and their broader contribution to the PhD community.

as suggested by Leondari and colleagues (1998), and fend off threats that low performance poses to self-esteem. This possibility will have to be explored in future research adopting a longitudinal design and investigating the actual content of participants' future work selves in more detail.

5.4.1 Implications for practice

As discussed in 5.1.2.1, there is ongoing debate about the employability of doctoral graduates (R. Gilbert et al., 2004; McAlpine & Norton, 2006). The call for wider employment-related skills has led to initiatives to improve doctoral graduates' employability in the UK (e.g., Roberts, 2002; United Kingdom Research Councils and the Arts and Humanities Research Board, 2001; or Vitae, formerly the UK GRAD programme), in the US (e.g., Gaff et al., 2003), in Canada (e.g., Evers et al., 2003), and in Australia (e.g., Council of Australian Deans and Directors of Graduate Studies, 2005). Currently, postgraduate research students are expected to take responsibility for their own learning and identify and address their own skill gaps (Craswell, 2007; Metcalfe & Gray, 2005). The FWS may provide a basis for mental simulation that enables postgraduate research students to identify future requirements of skills, networks and other resources, and may fuel the motivation to build these resources by providing a sense of hope and optimism.

5.4.2 Limitations

So far, the analysis of proactive behaviours linked to FWS narratives has been limited to two proactive career behaviours – networking and proactive skill development. Future research may take a broader approach and attempt a more comprehensive and inductive analysis of the individuals' goals. A major limitation of the study described in this chapter (and in Chapter 4) lies in the study design. Without an option to participate in the study but not provide a future self narratives, participants who found themselves unable to envision their future self may have dropped out of the study⁴². This would however provide a more conservative test of the link between the characteristics of the FWS and proactive behaviour.

⁴² In some rare cases however, participants did not provide a FWS narrative but state that they found themselves unable to imagine their future self. In the present study, the FWS of these participants was coded as missing.

6 Chapter 6 – A guiding image for P-E fit proactivity: Exploring FWS over time

In Chapter 4, I have explored the effects of the perceived characteristics of the FWS on two proactive behaviours that reflect individuals' attempts to shape their future and their career: proactive feedback seeking which involves continuous improvement in one's current job, and proactive career behaviour which involve behaviours related to future career opportunities. In Chapter 5, I have focused on FWS narratives, and have investigated the link between the characteristics of these narratives and two specific proactive career behaviours, skill development or network building. Both chapters are based on cross-sectional data. Based on theoretical considerations I have treated the FWS as an antecedent of proactive career behaviours. However, the reverse relationship is also possible. Proactive career behaviours such as career planning and consultation may in turn lead to a more accessible FWS, and a richer FWS narrative.

In this chapter, I address this shortcoming through a longitudinal study design which I describe in the Method section below.

In addition to this methodological improvement, I also broaden the theoretical framework of the previous chapters by focusing on three different proactive behaviours that form part of person-environment (P-E) proactivity. Below I first discuss the concept of P-E proactivity in more detail. I then propose mechanisms through which the future work self is likely to influence this higher-order factor of proactive behaviour (Parker & Collins, 2009).

6.1 Person-Environment (P-E) fit proactivity

Person-environment (P-E) fit reflects the idea that individual-level outcomes result from the interaction of person and environment, rather than from one or the other separately (e.g., Lewin, 1951; Murray, 1938). This basic assumption underlies theories in various domains of organizational behaviour research (see Edwards, 1996), such as organizational entry (e.g., Chatman, 1989), career choice (e.g., Holland, 1985; Schein, 1978), or quality of work life (e.g., Rice, McFarlin, Hunt, & Near, 1985), and is particularly prominent in the literature on organizational stress (e.g., Edwards & Cooper, 1990).

P-E fit encompasses two different versions of fit, supplies-values fit and demands-abilities fit. *Supplies-values fit* refers to the match between an individual's values, i.e., her conscious desires, her interests, motives and goals (Cummings & Cooper, 1979; Edwards, 1992) on one hand, and the environmental supplies available to pursue those values on the other hand. If supplies fall short of values, strain is expected to increase (Cummings & Cooper, 1979; French, Caplan, & Harrison, 1982). *Demands-abilities fit* refers to the match between an individual's abilities, including her skills, time, knowledge, and energy, and the objective and socially constructed requirements placed upon her (Edwards, 1996). When an individual compares the perceived environmental demands with her abilities, excess demands are proposed to increase stress (e.g., French et al., 1982).

Proactive person-environment fit behaviour refers to a higher-order category of proactive behaviours⁴³ aimed at changing either oneself or the environment to achieve a greater compatibility between the individual and the organization (Parker & Collins, 2009). In contrast to proactive work behaviour and proactive strategic behaviour, proactive P-E fit behaviour is more focused on the self.

Parker and Collins (2009) identify four different proactive P-E fit behaviours: job role negotiation, proactive career behaviour, feedback monitoring, and feedback seeking. They map the two types of P-E fit onto different proactive behaviours. They propose that proactive feedback seeking and feedback monitoring are aimed at initiating change in oneself to achieve a better fit with one's environment (D-A fit), while proactive career behaviour and job role negotiation are proposed to be aimed at changing the environment in order to achieve a better supplies-values (S-V) fit. Next, I discuss and refine this categorization.

6.1.1 Job role negotiation

Job role negotiation refers to individuals' attempts to change their job to better fit their skills and abilities (Ashford & Black, 1996; Dawis & Lofquist, 1978; Nicholson, 1984). Three interlinked streams of literature have explored individuals' proactive approach to shaping their work environment.

⁴³ See Chapter 1 for a review of higher-order factors of proactivity

Dawis and Lofquist (1978) extended the theory of work adjustment (Dawis, England, & Lofquist, 1964; Dawis, Lofquist, & Weiss, 1968), a P-E fit theory which proposes that individuals evaluate their needs against a "set of expected reinforcers" (Dawis & Lofquist, 1978, p. 77) provided by the work environment. A match between needs and reinforcers is proposed to result in satisfaction. A mismatch however will lead to dissatisfaction and attempts of adjustment. Dawis and Lofquist propose two different types of 'adjustment modes' (p. 78) as a reaction to a mismatch between individuals' needs and organizational reinforcers: A *reactive* mode of adjustment, where the individual accommodates to the situation, or an *active* mode of adjustment, which involves active attempts to change the situation.

Nicholson (1984) focused on employees' responses to work role transitions. He similarly discusses two different types of adjustment strategies individuals pursue when faced with role transitions. *Personal development* (p. 175) refers to adapting to change by altering one's frame of reference, values, or other identity-related attributes (A. L. Strauss, 1959). Personal development can be focused on individuals' values, skills, or life style. *Role development* on the other hand refers to an individual's attempts to change the role requirements to better fit her identity, values and ability. Nicholson proposes that these changes can involve the task objectives, scheduling, methods, materials, and the interpersonal relationships central to the role. In Nicholson's conceptualisation, role development and personal development do not constitute opposing ends of a continuum of possible reactions to a role transition, but are independent dimensions.

The idea that newcomers either change themselves or attempt to change their environment is also reflected in Black and Ashford's (1995) study. They investigated two different modes of newcomers' adjustment, *job change*, which refers to role redefinitions⁴⁴, altering of job procedures, the setting of new work goals, and changes to the mission of the role; and *self-change*, which refers to changes in individuals' appearance, their interpersonal style, and their general behaviour. They found individuals' need for control negatively related to self-change, but not significantly

⁴⁴ C.f. role making (Graen, 1976)

related to job change. Need for feedback was positively associated with self-change, but again unrelated to job change⁴⁵.

Finally, Ashford and Black (1996) more specifically focus on job role negotiation (or job change negotiation) as an aspect of proactive socialization during organizational entry. It involves negotiating role expectations, task assignments, and desirable job changes. Individuals engaging in job role negotiation attempt changing their job rather than changing their selves to better fit their role. Ashford and Black draw on theories of personal control which distinguish between predictive and behavioural control. Some socialization tactics employed by organizational newcomers such as sense-making (or feedback seeking) and network- and relationship building reduce the ambiguity and uncertainty in a new organizational context and enhance individuals' predictive control in a new organizational environment. Predictive control refers to the ability to make sense of, or predict, one's environment, in terms of behavioural requirements and consequences (Bell & Staw, 1989). Job role negotiation is however aimed at gaining behavioural control, the ability to control one's own behaviours that have an impact on the environment, and thus indirectly to control one's environment (Bell & Staw, 1989)⁴⁶.

Job role negotiation can be seen as aimed at changing the environment in order to achieve a better fit with one's values, goals, and interests (S-V fit).

6.1.2 Proactive feedback seeking and feedback monitoring

Proactive feedback seeking has been discussed in detail in Chapter 4. It refers to individuals active attempts to seek out information in order to determine "the correctness and adequacy of behaviors for attaining valued end states" (Ashford,

⁴⁵ Beyond these individual differences that predict adjustment modes, job novelty, the dissimilarity between the current job and previous jobs, was negatively related to self-change; fixed organizational socialization tactics (Van Maanen & Schein, 1979) were negatively related to job change.

⁴⁶ C.f. Weisz' (Rothbaum, Weisz, & Snyder, 1982; Weisz, 1990) concept of primary control, which refers to attempts to change objective conditions rather than adapting to them (secondary control). In Chapter 1, I have mentioned Bateman and Crant's (1993) argument that proactive behaviour reflects attempts to exert primary- rather than secondary control. The distinction between outcome control, behavioural control, and predictive control (Bell & Staw, 1989, see p. 241) can be used to differentiate further between different proactive behaviours (see Ashford & Black, 1996).

1986, p. 466). Ashford and Cummings (1983) distinguish between direct inquiry⁴⁷ (see also V. D. Miller & Jablin, 1991), and feedback monitoring. Feedback monitoring refers to individuals' attempts to evaluate their performance based on others' reactions to their behaviour, and based on comparisons with others' performance. Individuals choose between these strategies based on the perceived cost involved (Ashford et al., 2003; Ashford & Cummings, 1983).

In this chapter, I again distinguish between negative and positive feedback seeking. Different motives underlie the seeking of positive and negative feedback⁴⁸.

Individuals can be motivated by the desire to gain useful information on their performance (instrumental motive) (Ashford & Cummings, 1983). They can wish to protect their ego and self-esteem from the effects of negative feedback about their performance (ego-based motive) (Ashford & Cummings, 1983). And they can be motivated to control the impressions of others, i.e. to both avoid an unfavourable impression and to create a favourable one (Morrison & Bies, 1991).

Parker and Collins (2009) propose that proactive feedback seeking and feedback monitoring are aimed at initiating change in oneself to achieve a better fit with one's environment (D-A fit).

I argue that more specifically negative rather than positive feedback seeking is aimed at achieving a better fit with one's environment. While negative feedback may be hurtful to one's ego and potentially damage one's image, it has a higher diagnostic value (Ashford et al., 2003; Ashford & Tsui, 1991). Achieving a fit between environmental demands and one's abilities and behaviour will only be effective if it is based on accurate information about one's performance. In this chapter, I thus focus only on negative feedback seeking as an aspect of P-E fit proactivity.

⁴⁷ Throughout this dissertation I refer to direct inquiry as proactive feedback seeking.

⁴⁸ See Chapter 4 for a detailed exploration of the relationship between the characteristics of the future work self, and different feedback seeking motives.

6.1.3 Proactive career behaviour

Proactive career behaviour (or career initiative, see Seibert et al., 2001; Tharenou & Terry, 1998) involves attempts to shape and influence one's future career rather than to wait and see what happens or react to opportunities that present themselves. It involves career planning, i.e., exploring options, formulating plans, and setting goals; career consultation, i.e., seeking advice or help about career-related matters from others; networking, and skill development, i.e., cumulating relevant experience, expertise and abilities. Proactive career management focuses on "longer-term compatibility between the organization's requirement and the individual's career expectations and preferences" (Parker & Collins, 2009, p. 8). Parker and Collins argue that proactive career behaviours can be aimed at enhancing both types of P-E fit. Some dimensions of proactive career behaviour seem particularly relevant to enhancing S-V fit, such as career planning and networking, while proactive skill development is more likely to be aimed at creating D-A fit.

Below, I discuss the role of the future work self in the motivation of P-E fit proactivity and propose specific hypotheses.

6.2 *The FWS as a motivator of P-E fit proactivity – Aiming for fit with future demands and supplies*

P-E fit proactivity refers to individuals' attempts to address the discrepancy between their own values, skills, or needs, and their environment on one hand, and between environmental demands and their own resources on the other hand. Parker and Collins (2009) investigated P-E fit proactivity in a sample of Australian managers with an average organizational tenure of 4.63 years. However, most previous research on proactivity and P-E fit focuses on organizational entry. Within the literature on organizational socialization, newcomer proactive behaviour, i.e. "individual-driven or informal means of "self-socializing" " (Ashforth, Sluss, & Saks, 2007, p. 448), is proposed to facilitate newcomers' adjustment, including their fit with the job and organization (e.g., Ashford & Black, 1996; J. S. Black & Ashford, 1995; Gruman, Saks, & Zweig, 2006; Menguc, Han, & Auh, 2007; V. D. Miller & Jablin, 1991; Morrison, 1993a, 1993b, 2002; Wanberg & Kammeyer-Mueller, 2000). For example, Gruman, Saks, & Zweig (2006) report a positive

relationship between proactive behaviour and person-organization fit and person-job fit. Other researchers have focused on the interaction between proactive behaviour and institutionalized socialization (Kim, Cable, & Kim, 2005), and between P-O fit and proactive personality (Erdogan & Bauer, 2005).

Kim, Cable, and Kim (2005) explored the moderating role of employee proactivity in the relationship between organizations' socialization tactics and person-organization fit of organizational newcomers in a sample of 297 South Korean employees. They report that some proactive behaviours moderate the link between institutionalized socialization tactics and person-organization fit. For employees who engage in positive framing, i.e., who interpret their environment positively, and who engage in general socializing, institutionalized socialization tactics have a stronger effect on person-organization fit. For employees who proactively build a relationship with their supervisor institutionalized socialization tactics have a weaker effect on their person-organization fit. They do however not find a significant main effect of (supervisor-rated) information-seeking, feedback-seeking, relationship building, networking, and socializing on person-organization fit.

Erdogan and Bauer (2005) investigated the moderating effect of person-organization fit in the relationship between proactive personality and job- and career satisfaction. In samples of Turkish school teachers and US university professors, they found proactive personality positively related to job- and career satisfaction only for individuals with high person-organization fit. They propose goal alignment as a possible explanation: Employees whose values are congruent with the organization's are likely to engage in proactive behaviour more consistent with organizational values which may lead to greater progress towards their job and career goals⁴⁹.

I propose that P-E fit proactivity can be aimed not only at achieving compatibility between one's present environment and self, but that it can also be anticipatory. Rather than merely addressing discrepancies between their values and resources and their current environment (or between current environmental demands and current abilities), P-E fit proactivity can also address anticipated discrepancies.

⁴⁹ C.f. Chan's (2006) finding that situational judgement effectiveness moderates the relationship between proactive personality and job satisfaction and performance.

The FWS motivates P-E fit proactivity by making discrepancies between the present self or environment, and the hoped for future self (or environment) salient. As ideal selves, FWS are likely to reflect both D-A and S-V fit.

D-A fit. As a basis for mental simulation, the FWS enables the identification of incongruities between one's present abilities and the demands anticipated in one's hoped for future. It can thus motivate attempts to build the abilities required to better meet these anticipated future demands in order to achieve D-A fit in the future. This mechanism can motivate proactive behaviours aimed at initiating change in the self and building resources to meet future requirements. Figure 7 depicts the proposed mechanism⁵⁰.

As I have argued above, FWS reflect an ideal scenario in which the demands of the environment are matched by the individual's abilities and resources. Indeed, FWS narratives frequently contain accounts of a desired fit between the individual's ability and the demands of their future job. Two examples of future self narratives which explicitly mention confidence in one's ability as a characteristic of the future self are shown below.

"I will be a hard working and dedicated scientist, perhaps working for an environmental organisation or university. I will feel secure in my own knowledge and abilities, confident with talking about it, and hopefully enjoying what I do. [...]"

Postgraduate research student, Biological Sciences

"Research and lecturing, perhaps part-time as family commitme[]nts might mean that that is all that I want to do. Confident in my knowledge and able to explain in a clear and concise manner to other people. A good mentor to any students who I may have, letting them come to me for guidance, help and support. Be approachable yet knowledge[e]able about my chosen special[]ty."

Postgraduate research student, Medicine

⁵⁰ Figure 7 and Figure 8 display the future work self and the future environment as separate to reflect the idea of future P-E fit. However, future work self narratives include accounts of both the future self and the environment this future self will interact with, and fit between the future environment and the future self is an integral part of the future work self. I consider the future environment a part of the future work self.

As scenarios providing a good fit between future demands and abilities, FWS can be used to identify discrepancies between these anticipated demands and one's present abilities. By comparing one's present skills and abilities with anticipated future demands, skill gaps can be identified, which can motivate P-E fit proactivity aimed at changing the self such as proactive skill management, the acquisition of skills and knowledge required in the future, and feedback seeking aimed at improving one's skills and performance.

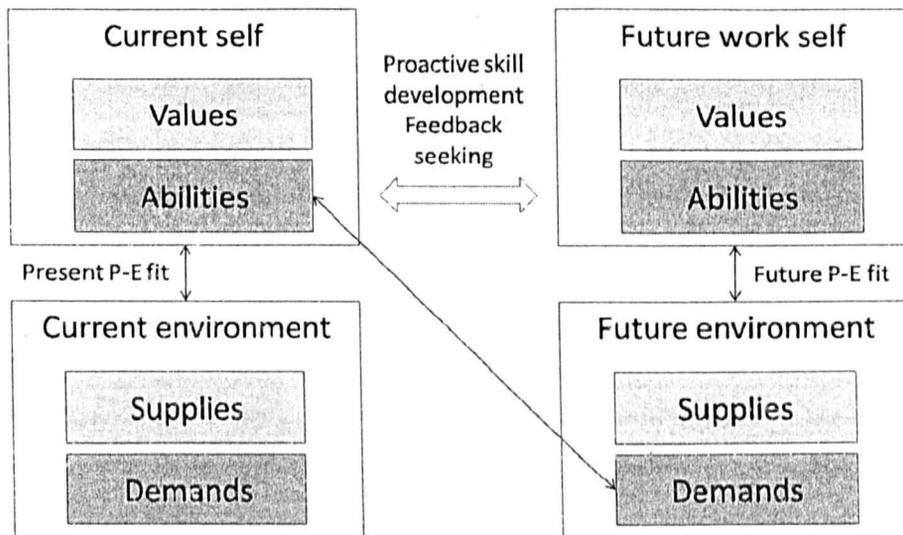


Figure 7. FWS and future D-A fit

S-V fit. Future selves reflect individuals' values and mediate the effect of socio-cultural values on behaviour (Oyserman & Fryberg, 2006; see also Cropanzano et al., 1993). They are based on social categorizations and roles and views of one's skills and talents. Past performance and self-evaluation play an important role in the construction of future selves (Meara et al., 1995). In addition, individuals imagine what is possible for themselves by drawing comparisons with significant others and by internalizing norms and stereotypes relating to their social identities (Cross & Markus, 1991; Kao, 2000; Knox et al., 1998).

FWS narratives tend to reflect the desired fit with one's values, interests and ideals. Frequently, these include having a job that leaves room for one's personal life. Examples for narratives reflecting future S-V fit are shown below.

"[...] My job would involve doing something worthwhile, that helps the natural world in some way, with a great deal of outside work and some travelling and would also satisfy my ideals."

Postgraduate research student, Biological Sciences

"I see myself doing a job that I enjoy - not sure yet what this will be. I want to be able to [...] do something about my values and beliefs in my work[.]life, e.g. helping people, fighting for environmental protection etc. [...]"

Postgraduate research student, Management

Proactive behaviours aimed at shaping one's future environment can be seen as aimed at achieving S-V fit in the future (see Figure 8). FWS reflect not only present values and interests, but are frequently based on anticipated social categorizations, for example as parent or spouse⁵¹. While these categorizations may not be future-oriented for all study participants, some participants explicitly mention anticipating a change in their priorities, and talk more abstractly about "a" family or spouse (e.g., "*maybe [have] a family*"). The example below shows a section of a future self narrative in which a postgraduate research student is contemplating the priorities of her future self as a mother.

"[...] However, I am not totally career-minded and would think that I would put family ahead of a job, so suspect that at some point in life I will have time off to have children and/or work part-time."

Postgraduate research student, Chemistry

Another example is shown in the narrative quoted above ("*perhaps part-time as family commitme[.]nts might mean that that is all that I want to do*").

These examples provide some support for the idea that individuals anticipate the environmental supplies they will require to achieve S-V fit in the future.

⁵¹ C.f. Cross and Markus' (1991) finding that future selves of 25- to 39-year-olds frequently contain accounts of "settling down" (Levinson, Darrow, Klein, Levinson, & McKee, 1976, p. 21).

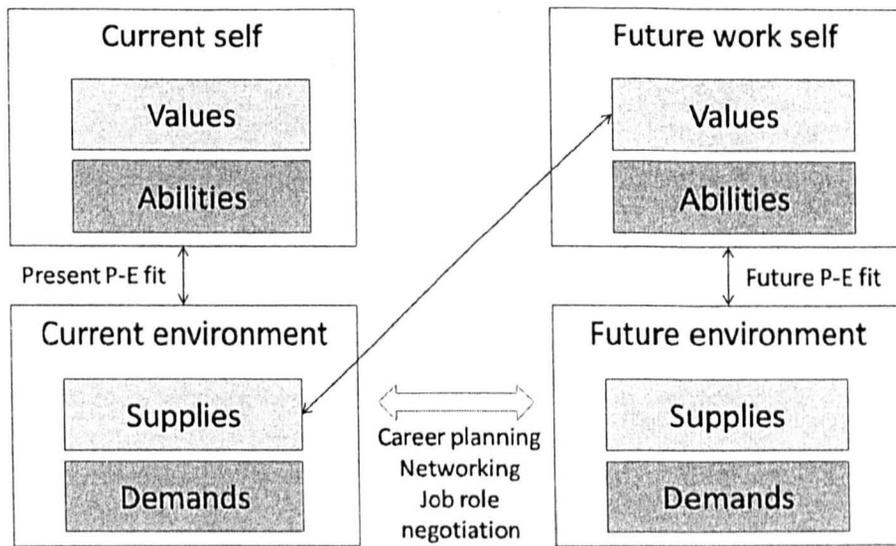


Figure 8. FWS and future S-V fit

6.2.1 Hypotheses

Above, I have explored the mechanisms through which a FWS can motivate P-E fit proactivity. Building on the distinction between D-A fit and S-V fit (Edwards, 1996), I have argued that FWS can create discrepancies between one's current resources and abilities, and future demands; and between one's current or anticipated future values, and future environmental supplies. I have mapped these discrepancies onto different types of proactive behaviour. Proactive skill development and feedback seeking are mainly aimed at changing the self to better meet future demands, while career planning, networking and job role negotiation may primarily be aimed at shaping future environmental supplies.

In previous chapters I have argued how self-rated characteristics of the FWS and the characteristics of the FWS narrative influence proactive behaviour via different mechanisms. I proposed that more elaborate and more specific FWS narratives provide a more effective basis for mental simulation and the setting of sub-goals, while more accessible and exclusive FWS are more likely to be used as a standard against which the present self is compared; more important FWS the individual is strongly committed to have a stronger influence on behaviour. In a cross-sectional sample I found a positive relationship between the elaboration of a FWS narrative, and the setting of proactive goals aimed at bringing them about⁵². I

⁵² See Chapter 5

found a negative relationship between the exclusivity of a FWS, and proactive career behaviour, and an indirect positive relationship between the accessibility of the FWS and negative feedback seeking via an ego protection motive. The importance of the FWS had an indirect positive relationship with negative feedback seeking via an instrumental motive⁵³.

In this chapter, I explore these relationships in a two-wave longitudinal design, and include job role negotiation as a further facet of P-E fit proactivity.

The proposed relationships are shown in Figure 9. In summary, I propose:

H1a. The accessibility, importance, and exclusivity of a FWS at Time 1 will be positively related to proactive career behaviours at Time 2.

H1b. The accessibility, importance, and exclusivity of a FWS at Time 1 will be positively related to negative feedback seeking at Time 2.

H1c. The accessibility, importance, and exclusivity of a FWS at Time 1 will be positively related to job role negotiation at Time 2.

H2a. The elaboration and specificity of a FWS narrative at Time 1 will be positively, the uncertainty of a FWS narrative will be negatively related to proactive career behaviours at Time 2.

H2b. The elaboration and specificity of a FWS narrative at Time 1 will be positively, the uncertainty of a FWS narrative will be negatively related to feedback seeking and feedback monitoring at Time 2.

H2c. The elaboration and specificity of a FWS narrative at Time 1 will be positively, the uncertainty of a FWS narrative will be negatively related to job role negotiation at Time 2.

⁵³ See Chapter 4

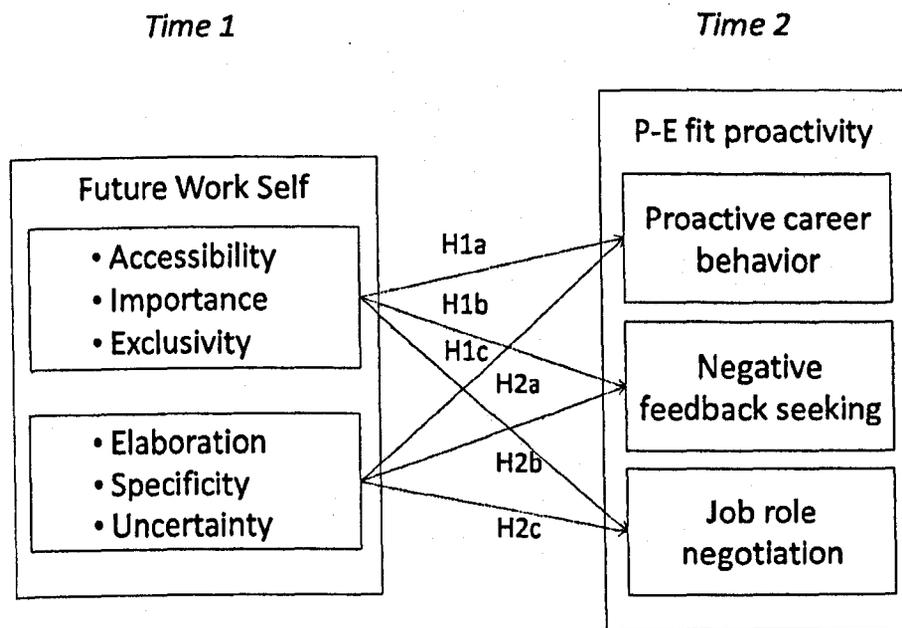


Figure 9. Proposed model

6.3 Method

6.3.1 Sample and procedure

Data were collected from postgraduate research students who participated in a web-survey at a large research-intensive university in the North of England at Time 1⁵⁴, and 6 months later at Time 2. In both surveys, I asked participants to enter a code consisting of a combination of letters of their first name, and their mother's Maiden name, and the day of their date of birth. Based on this code, I identified 82 students who participated in both studies⁵⁵. Students' demographics served as an additional control to ensure data from the two studies were matched correctly.

⁵⁴ See Chapter 4

⁵⁵ As described in Chapter 2, the study was not originally designed as longitudinal. Participants at Time 1 were not explicitly informed of a possible second data collection. They were however asked to provide the code described above that would allow me to identify them should they ever participate in any further research. The second data collection at Time 2 was set up as an independent study.

69.5% of the students in the final sample were female. At Time 2, 33.9% of students were in their second, and 32.9% in their third year of study. 26.6% were in their fourth year. The average age among participants was 29.2 (SD = 6.69).

I compared this final sample to the students who had participated in Study 1 (Time 1), but not 6 month later in Study 2 (Time 2). There were no significant differences in the age ($F(1,313) = 1.88, n.s.$), the year of study ($F(1,305) = 1.02, n.s.$), and the mode of study ($F(1,313) = .72, n.s.$) between students who participated only in Study 1, and students who participated in both studies. However, the longitudinal sample contained a higher percentage of female students ($F(1,313) = 3.89, p < .05$). Participants who took part in both studies also showed lower negative affect than those who only participated in Study 1 ($F(1,312) = 1.98, p < .05$), but did not report higher positive affect ($F(1,312) = 1.03, n.s.$). They also reported a higher accessibility of their FWS ($F(1,313) = 7.79, p < .01$), and produced more elaborate FWS narratives ($F(1,249) = 9.33, p < .01$). There were no differences in any other characteristics of the future work self, or in participants' self-rated proactive behaviours. Students who participated in both studies were more conscientious ($F(1,308) = 6.26, p < .05$), agreeable ($F(1,308) = 8.82, p < .01$), and open to experience ($F(1,308) = 11.45, p < .01$). While these differences are not unexpected, they limit the generalizability of the results of the longitudinal sample, as will be discussed in more detail in the Discussion section of this chapter, and in the general discussion (8.4).

6.3.2 Measures

Self-rated characteristics of the FWS were assessed with the scales described in more detail in Chapter 4 (see 4.3.2.1).

- *Accessibility of the FWS* (Time 1: $\alpha = .86$; Time 2: $\alpha = .92$), the mental clarity of the imagined future scenario, and its accessibility in the memory, was assessed with two items adapted from King and Smith (2004).
- *Importance of the FWS* (Time 1: $\alpha = .79$; Time 2: $\alpha = .71$), individuals motivation to achieve a hoped for future self, was assessed with 3 items adapted from Norman and Aron (2003).
- *Exclusivity of the FWS* (Time 1: $\alpha = .81$; Time 2: $\alpha = .79$), which reflects whether a future self is the only possible future an individual imagines for themselves,

was assessed with three items. An example item is “This is only one of many futures I imagine for myself” (reverse coded).

- *Temporal distance of the FWS* was assessed with a single item (“How far in the future is the scenario you imagined? (in years from now)”). If participants provided a time span rather than a definitive number of years (e.g., 5-10 years) the mean served as an estimation of the temporal distance of the future self. While the temporal distance of the FWS was not part of the hypotheses tested in this chapter, it was used to explore a post-hoc hypothesis (see 6.5.2).

The *characteristics of the FWS narratives* obtained at Time 1 and Time 2 were rated by two independent coders using the procedure described in 5.2.3. The narratives were rated in terms of their elaboration, their specificity, and their uncertainty. Interrater reliabilities are shown in Table 6.1. The interrater reliability for ratings of uncertainty was slightly lower than generally deemed acceptable (Krippendorff, 2004).

Table 6.1.
Interrater reliabilities

	Time 1	Time 2
FWS narrative: Elaboration	$\alpha = .81$	$\alpha = .85$
FWS narrative: Uncertainty	$\alpha = .67$	$\alpha = .63$
FWS narrative: Specificity	$\alpha = .83$	$\alpha = .84$

α = Krippendorff's Alpha

Proactive career behaviour (Time 1: $\alpha = .84$; Time 2: $\alpha = .84$) was operationalized by combining 12 items from Bachman, O'Maley and Johnston (1978) and Penley and Gould (1981) as in the study by Claes and Ruiz-Quintanilla (1998). Items were adopted slightly to fit the context (e.g., “I seek advice from my supervisor(s) or colleagues about additional training or experience I need in order to improve my future work prospects”).

Negative feedback seeking (Time 1: $\alpha = .82$; Time 2: $\alpha = .82$) was assessed with four items which were adapted from Ashford & Tsui's (1991) measure of feedback types. The wording was changed slightly to fit the context (e.g., “I ask my supervisor to be critical when s/he gives me feedback”).

Job role negotiation (Time 1: $\alpha = .83$; Time 2: $\alpha = .68$) was assessed with three items adapted from Ashford and Black's (1996) measure of newcomers' job

change negotiation. The items were adapted slightly to fit the context (e.g., “I negotiate with my supervisor about desirable directions in my PhD” and “I discuss with my supervisor about what s/he expects from me”).

Demographics. Demographic variables collected included participants’ age, gender, and their year of study.

6.4 Results

Means and standard deviations of study variables are shown in Table 6.2. Correlations between study variables are shown in Table 6.3. The paired sample correlations for the accessibility of the FWS ($r = .44, p < .001$), its perceived importance ($r = .45, p < .001$) and its exclusivity ($r = .45, p < .001$) were significant and of moderate size (Cohen, 1988, 1992), indicating that the self-rated characteristics of the FWS show some stability over time. The characteristics of the FWS narrative seem to be less stable. Paired sample correlations were not significant for the elaboration ($r = .25, n.s.$) or specificity ($r = .22, n.s.$) of the narrative. Uncertainty ratings were significantly related over time ($r = .34, p < .05$). Proactive P-E fit behaviours were mostly moderately related over time (proactive career behaviours: $r = .44, p < .001$; job role negotiation: $r = .46, p < .001$). Feedback monitoring showed the lowest correlation over time ($r = .24, p < .05$), and feedback seeking the highest ($r = .58, p < .001$). Bonferroni-corrected paired t-tests revealed no significant differences between the mean scores of variables at the two time points.

The zero-order correlations provided some initial support for Hypotheses 1a and 1c for the accessibility of the FWS. Accessibility of the FWS at Time 1 was significantly related to proactive career behaviour ($r = .24, p < .05$) and job role negotiation ($r = .33, p < .01$) at Time 2. There were no significant relationships between the characteristics of the FWS and negative feedback seeking.

The zero-order correlations provided only weak support for Hypotheses 2a, 2b and 2c. The uncertainty of the FWS narrative was significantly related to job role negotiation at Time 2 ($r = -.30, p < .06$).

I then proceeded to test the Hypotheses using conditional regression analysis (Plewis, 1985). Conditional regression analysis or longitudinal regression analysis is used to predict change based on two-wave longitudinal data. This approach is

preferable when the goal is to remove the influence of the earlier variable (Cohen et al., 2003). The Time 1 control variables are first entered into the equation to predict the Time 2 outcomes. In the second equation, both the Time 1 variables and the predictor are entered into the regression equation.

Because of the relatively low statistical power of the study, I conducted separate conditional regression analyses for the self-rated characteristics of the FWS and the characteristics of the FWS narratives.

Table 6.2.
Means and standard deviations of study variables

	Mean (SD)
1. Accessibility of FWS Time 1	3.61 (0.98)
2. Accessibility of FWS Time 2	3.81 (1.09)
3. Importance of FWS Time 1	3.94 (0.72)
4. Importance of FWS Time 2	4.14 (0.69)
5. Exclusivity of FWS Time 1	2.68 (0.88)
6. Exclusivity of FWS Time 2	2.68 (0.89)
7. FWS narrative elaboration Time 1	3.39 (0.92)
8. FWS narrative elaboration Time 2	3.09 (0.99)
9. FWS narrative uncertainty Time 1	1.64 (0.92)
10. FWS narrative uncertainty Time 2	1.68 (0.77)
11. FWS narrative specificity Time 1	3.51 (0.80)
12. FWS narrative specificity Time 2	3.31 (0.92)
13. Proactive career behaviour Time 1	3.36 (0.60)
14. Proactive career behaviour Time 2	3.47 (0.61)
15. Negative feedback seeking Time 1	3.70 (0.77)
16. Negative feedback seeking Time 2	3.79 (0.62)
17. Job role negotiation Time 1	3.38 (0.85)
18. Job role negotiation Time 2	3.37 (0.75)

Table 6.3.
Correlations between study variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Age														
2. Gender	-.03													
3. Year of study	.17	-.06												
4. Accessibility of FWS Time 1	-.02	.12	-.14											
5. Accessibility of FWS Time 2	-.01	.14	-.05	.44***										
6. Importance of FWS Time 1	-.10	-.12	.16	.39***	.25*									
7. Importance of FWS Time 2	-.07	-.02	.08	.22	.47***	.45***								
8. Exclusivity of FWS Time 1	.08	.02	-.08	.14	.29*	.25*	.12							
9. Exclusivity of FWS Time 2	-.05	.08	-.16	.13	.19	.26*	.33**	.45***						
10. FWS narrative elaboration Time 1	-.13	.00	-.21	.24*	.13	.02	.07	.07	.05					
11. FWS narrative elaboration Time 2	-.11	-.02	-.01	.06	.25	-.07	.18	.14	.11	.25				
12. FWS narrative uncertainty Time 1	-.01	-.15	.07	-.37**	-.12	-.01	-.04	.12	-.09	-.16	-.23			
13. FWS narrative uncertainty Time 2	-.06	.00	-.01	.13	-.15	.09	.05	.24	.10	.18	-.14	.34*		
14. FWS narrative specificity Time 1	-.09	.05	-.18	-.03	.22	-.04	.22	-.05	.13	.39***	.06	.14	-.04	
15. FWS narrative specificity Time 2	-.19	-.02	-.10	.05	.16	.00	.07	.12	.10	.12	.60***	-.10	-.18	.22

Table 6.3. continued.
Correlations between study variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
16. Proactive career behaviour Time 1	-.11	.17	-.17	.38** *	.25	.43** *	.22	.13	.07	.18	-.09	-.10	.15	.24*	.06	
17. Proactive career behaviour Time 2	-.17	.07	-.22	.24*	.39** *	-.02	.41** *	-.04	.11	.04	.17	-.25	-.15	.09	.21	.44***
18. Negative feedback seeking Time 1	.13	-.09	.15	.09	.09	.03	.07	-.15	-.16	-.11	-.02	.06	.04	.12	.03	.18
19. Negative feedback seeking Time 2	-.11	.10	.16	.05	.08	-.11	-.11	-.02	-.16	-.03	.03	-.06	.05	.03	.04	.26*
20. Job role negotiation Time 1	-.05	.17	-.24*	.27**	.08	.13	.11	-.03	-.09	.03	-.06	-.12	.25	.15	.14	.42***
21. Job role negotiation Time 2	-.20	.07	-.40***	.33**	.27**	.00	.05	-.01	.14	.04	.05	-.30*	-.16	.02	.26*	.33*

	17	18	19	20
18. Negative feedback seeking Time 1	.18			
19. Negative feedback seeking Time 2	.18	.54***		
20. Job role negotiation Time 1	.25*	.34***	.27	
21. Job role negotiation Time 2	.52***	.13	.25*	.45***

6.4.1 Self-rated characteristics of the FWS

For none of the proactive P-E fit behaviours, the FWS variables predicted a significant proportion of variance beyond the Time 1 predictors ($\Delta R^2 = .04$, *n.s.*, for proactive career behaviour, $\Delta R^2 = .05$, *n.s.*, for negative feedback seeking, and $\Delta R^2 = .04$, *n.s.*, for job role negotiation). However, some individual FWS variables emerged as significant predictors. The results are shown in Tables 6.4, 6.5, and 6.6.

Table 6.4.
Hierarchical regression analyses predicting proactive career behaviour at Time 2

	Step 1	Step 2	Step 3
	β		
Step 1:			
Age	-.14	-.07	-.10
Gender	.06	.03	-.01
Year of study	-.17	-.15	-.10
Step 2:			
Proactive career behaviour Time 1		.41**	.43**
Step 3:			
Accessibility of FWS			.12
Importance of FWS			-.19
Exclusivity of FWS			-.05
Adjusted R ²	.02	.17	.17
ΔR^2 Step		.16**	.04
F	1.39 <i>n.s.</i>	4.42**	2.91*

p* < .05, *p* < .01, ****p* < .001

Table 6.5.
Hierarchical regression analyses predicting negative feedback seeking at Time 2

	Step 1	Step 2	Step 3
	β		
Step 1:			
Age	-.15	-.23	-.29
Gender	.12	.12	.06
Year of study	.21	.09	.16
Step 2:			
Negative feedback seeking Time 1		.57***	.57***
Step 3:			
Accessibility of FWS			.09
Importance of FWS			-.25*
Exclusivity of FWS			.08
Adjusted R ²	.02	.32	.34
ΔR^2 Step		.30***	.05
F	1.45 <i>n.s.</i>	8.76***	5.81***

p* < .05, *p* < .01, ****p* < .001

Hypothesis 1a was not supported. The accessibility ($\beta = .12$, *n.s.*), importance ($\beta = -.19$, *n.s.*), and exclusivity ($\beta = -.05$, *n.s.*) were not significantly related to proactive career behaviour at Time 2, after controlling for demographic variables and Time 1 proactive career behaviour (see Table 6.4).

Hypothesis 1b was also not supported. The importance of the FWS was significantly related to negative feedback seeking at Time 2 after controlling for Time 1 negative feedback seeking, however contrary to my expectations the relationship was negative ($\beta = -.25, p < .05$; see Table 6.5). The accessibility ($\beta = .09, n.s.$) and exclusivity ($\beta = .08, n.s.$) were not significantly related to negative feedback seeking at Time 2.

Table 6.6.
Hierarchical regression analyses predicting job role negotiation at Time 2

	Step 1	Step 2	Step 3
	β		
Step 1:			
Age	-.13	-.12	-.15
Gender	.06	-.01	-.04
Year of study	-.34	-.28	-.24
Step 2:			
Job role negotiation Time 1		.40***	.36***
Step 3:			
Accessibility of FWS			.24*
Importance of FWS			-.08
Exclusivity of FWS			-.01
Adjusted R ²	.12	.27	.28
ΔR^2 Step		.15***	.04
F	4.00*	7.03***	4.66***

* $p < .05$, ** $p < .01$, *** $p < .001$

Hypothesis 1c was partially supported. The accessibility of the FWS significantly predicted job role negotiation at Time 2, after controlling for the Time 1 predictor ($\beta = .24, p < .05$; see Table 6.6). The exclusivity ($\beta = -.08, n.s.$) and importance of the FWS ($\beta = -.01, n.s.$) did not emerge as significant predictors.

6.4.2 Characteristics of the FWS narrative

As for the self-rated characteristics of the FWS, the characteristics of the FWS narrative as rated by two independent coders did not predict significant proportions of variance in P-E proactivity ($\Delta R^2 = .05, n.s.$, for proactive career behaviour, $\Delta R^2 = .01, n.s.$, for negative feedback seeking, and $\Delta R^2 = .08, n.s.$, for job role negotiation). Conditional regression analyses are shown below in Tables 6.7, 6.8, and 6.9.

Hypothesis 2a was not supported. The elaboration ($\beta = -.12, n.s.$), specificity ($\beta = .08, n.s.$), and uncertainty ($\beta = -.21, n.s.$) of the FWS narrative were not significantly related to proactive career behaviour at Time 2 after controlling for Time 1 proactive career behaviour (see Table 6.7).

Hypothesis 2b was also not supported. The characteristics of the FWS narrative were not significantly related to negative feedback seeking at Time 2 after controlling for the Time 1 predictor variable (elaboration: $\beta = .02$, *n.s.*; specificity: $\beta = .04$, *n.s.*; and uncertainty: $\beta = -.11$, *n.s.*; see Table 6.8).

Table 6.7.
Hierarchical regression analyses predicting proactive career behaviour at Time 2

	Step 1	Step 2	Step 3
	β		
Step 1:			
Age	-.16	-.09	-.10
Gender	.11	.07	.01
Year of study	-.22	-.19	-.19
Step 2:			
Proactive career behaviour Time 1		.36**	.34*
Step 3:			
FWS narrative elaboration			-.12
FWS narrative specificity			.08
FWS narrative uncertainty			-.21
Adjusted R ²	.04	.15	.16
ΔR^2 Step		.12	.05
F	1.78 <i>n.s.</i>	3.44*	2.41*

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 6.8.
Hierarchical regression analyses predicting negative feedback seeking at Time 2

	Step 1	Step 2	Step 3
	β		
Step 1:			
Age	-.19	-.29	-.30
Gender	.00	.05	.02
Year of study	.15	.04	.05
Step 2:			
Negative feedback seeking Time 1		.55***	.56***
Step 3:			
FWS narrative elaboration			.02
FWS narrative specificity			.04
FWS narrative uncertainty			-.11
Adjusted R ²	-.00	.28	.25
ΔR^2 Step		.28***	.01
F	.96 <i>n.s.</i>	6.33***	3.63**

* $p < .05$, ** $p < .01$, *** $p < .001$

Hypothesis 2c was partially supported. Uncertainty in the FWS narrative was significantly related to job role negotiation at Time 2, after controlling for job role negotiation at Time 1 ($\beta = -.28$, $p < .05$). The elaboration and specificity of the narrative did not emerge as significant predictors ($\beta = -.10$, *n.s.*, for elaboration, and $\beta = .01$, *n.s.*, for specificity, respectively).

Table 6.9.
Hierarchical regression analyses predicting job role negotiation at Time 2

	Step 1	Step 2	Step 3
	β		
Step 1:			
Age	-.05	-.03	-.04
Gender	.01	-.05	-.11
Year of study	-.38**	-.31**	-.30*
Step 2:			
Job role negotiation Time 1		.39**	.38**
Step 3:			
FWS narrative elaboration			-.10
FWS narrative specificity			.01
FWS narrative uncertainty			-.28*
Adjusted R ²	.10	.24	.29
ΔR^2 Step		.15**	.08
F	3.13*	5.46***	4.21***

* $p < .05$, ** $p < .01$, *** $p < .001$

6.5 Discussion

The purpose of this chapter was to investigate the relationships proposed in Chapter 4 and Chapter 5 in a longitudinal design. I proposed that the accessibility, importance, and exclusivity of the FWS and the elaboration, specificity and uncertainty of the FWS narrative measured at Time 1 would be significantly related to three different proactive behaviours aimed at creating P-E fit at Time 2.

6.5.1 Proactive career behaviour

Proactive career behaviour was relatively stable in the present sample ($r = .44$, $p < .001$, between Time 1 and Time 2 proactive career behaviour). Proactive career behaviour at Time 2 was not predicted by FWS variables measured at Time 1, once proactive career behaviour at Time 1 had been controlled for.

The relationship between the uncertainty of the FWS narrative at Time 1 and proactive career behaviour at Time 2 was near significant ($\beta = -.21$, $t = -1.58$), and uncertainty may have emerged as a significant predictor in a larger sample. I discuss the limitations of the relatively small sample this study is based on below. This near-significant finding provides some initial support for the idea that a less uncertain FWS narrative can over time encourage proactive career behaviour. Being uncertain about their desired future and their ability to make it become reality, individuals may be less motivated to plan their future, to seek advice on their career prospects, and to build the skills and networks required for their future career. To explore this

relationship in more detail, I then focused on the different facets of proactive career behaviour. As discussed previously, Claes and Ruiz-Quintanilla (1998) differentiate between four different proactive career behaviours. Career planning refers to exploring options, setting goals, and formulating plans. Career consultation involves seeking information, advice, or help about career-related matters from others such as supervisors or colleagues. Networking refers to building interpersonal networks in which to seek advice, information, and help. Proactive skill development finally includes cumulating work experiences and increasing career-relevant knowledge, skills, and abilities, some of which may not be required in one's current role or job but are future oriented. I conducted separate conditional regression analyses for each of these proactive career behaviours to explore their relationship with the uncertainty expressed in the FWS narrative. In step 1, age, gender, and year of study were entered as predictors. In step 2, the Time 1 predictor was entered, before entering the Time 1 characteristics of the FWS narrative in step 3. The results are shown in Table 6.10.

Table 6.10.
Hierarchical regression analyses predicting the four aspects of proactive career behaviour

	Career planning		Career consultation		Networking		Proactive skill development	
	Step 2	Step 3	Step 2	Step 3	Step 2	Step 3	Step 2	Step 3
	β							
Step 2:								
Time 1 predictor	.42**	.38**	.27*	.25*	.49	.51	.45**	.43***
Step 3:								
FWS narrative elaboration		.02		-.07		-.15		-.25*
FWS narrative specificity		-.04		.09		.00		.12
FWS narrative uncertainty		-.28*		-.12		.02		-.38**
Adjusted R ²	.13	.15	.23	.20	.19	.17	.19	.33
ΔR^2	.17***	.07 n.s.	.07*	.02	.22	.02	.20**	.17**
F	2.76*	2.23	5.02**	2.93*	2.39**	1.48*	4.22**	4.83**

*p < .05, **p < .01, ***p < .001

Career planning at Time 2 was significantly predicted by an uncertain FWS narrative at Time 1 ($\beta = -.28, p < .05$), after controlling for Time 1 career planning. Postgraduate research students who are very uncertain about what they would like their FWS to be and are not confident that their desired future will become reality think ahead to the next few years less and plan less what they need to do for their career. The relationship between uncertainty in the FWS narrative and career

consultation ($\beta = -.12, n.s.$) and networking ($\beta = .02, n.s.$) at Time 2 was not significant after controlling for the Time 1 predictors. The characteristics of the FWS narrative at Time 1 predicted a significant proportion of variance in Time 2 proactive skill development after controlling for the Time 1 predictor ($\Delta R^2 = .17, p < .01$). The uncertainty of the FWS narrative had a significant negative relationship with proactive skill development at Time 2 ($\beta = -.38, p < .01$). This supports the idea that a very uncertain FWS does not motivate the anticipatory development of skills. Individuals who are not sure what they would like their FWS to be like, and are very uncertain about the future they imagine becoming reality are less motivated to build the skills that will ensure fit between their present abilities and the demands they may be facing in the future.

Somewhat surprisingly, the elaboration of the FWS narrative emerged as a significant negative predictor of change in proactive skill development. The zero-order correlation between the elaboration of the FWS narrative at Time 1 and proactive skill development at Time 2 ($r = -.19, n.s.$) was however non-significant.

I then explored the possibility of an interaction between the elaboration and uncertainty of the FWS narrative in the prediction of change in proactive career management. Elaboration on a future work self the individual is fairly certain about may reflect a FWS that provides a better basis for mental simulation. A highly uncertain FWS that is also very elaborate may more strongly reflect individuals' thoughts of doubt and indecision than a highly uncertain FWS that is not particularly elaborate. The interaction between elaboration and uncertainty of the FWS narrative at Time 1 in the prediction of proactive skill development at Time 2 was near significant ($t = 1.77, p < .10$). Figure 10 shows the interaction graph.

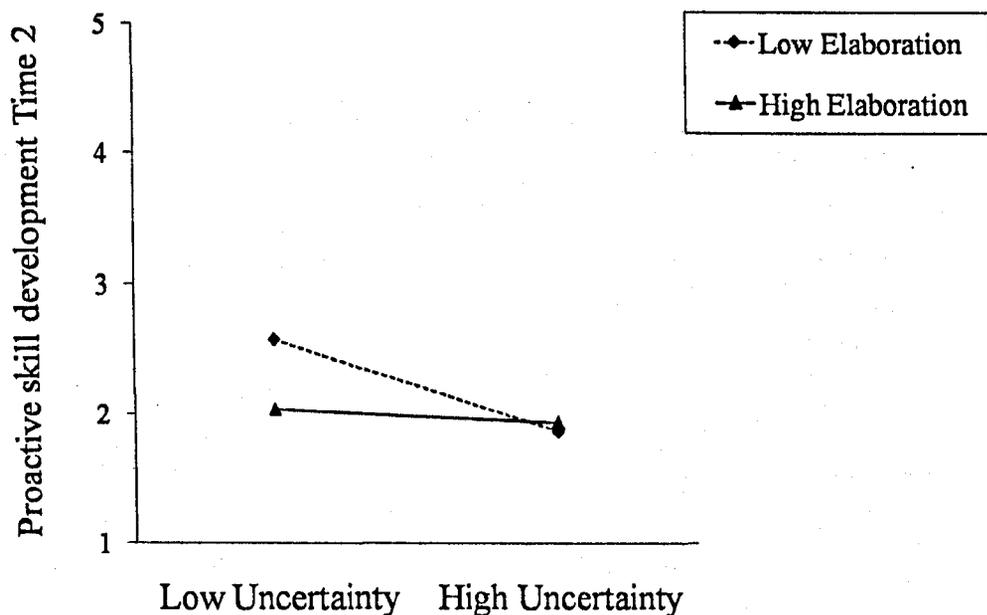


Figure 10. Interaction between elaboration and uncertainty in FWS narratives

High uncertainty was associated with lower levels of proactive skill development, irrespective of how elaborate the FWS narrative was. Contrary to my expectations, not very elaborate and highly certain FWS were associated with the highest levels of proactive skill development. Elaboration as rated by the two coders takes into account how many different aspects of the future the narrative contains. Narratives rated as most elaborate contain details of the work environment, of the sort of person the individual wants to become, aspects of their personal life, etc. These FWS are likely to be more rounded and more holistic. However, FWS that are less elaborate and may thus potentially be more narrowly focused on career aspects seem to be associated with higher levels of proactive skill development. This finding suggests that less complex and more narrow FWS provide a more effective basis for mental simulation of very specific plans and goals. More complex FWS may however have beneficial effects on individuals' affective reactions to goal progress in relation to their FWS. Self-complexity theory (Linville, 1985, 1987) suggests based on the associative network model⁵⁶ that individuals higher in self-complexity will

⁵⁶ According to the associative network model, activation should spread to less of the total network if the network is very complex and its components semantically differentiated. In a very

show less intensive affective reactions to positive and negative life experiences. In line with this idea, Niedenthal, Setterlund, and Berry (1992) differentiate between actual- and possible self-complexity, and show that the complexity of individuals' future selves mediates the effect of feedback about future goals on individuals' affective reactions. Future research may explore the differential effects of narrow versus complex FWS on individuals' planning and goal setting, and on their affective reactions.

6.5.2 Negative feedback seeking

None of the characteristics of the FWS narrative were significantly associated with negative feedback seeking at Time 2, after controlling for negative feedback seeking at Time 1. The self-rated characteristics of the FWS did not predict a significant proportion of variance in negative feedback seeking at Time 2, after controlling for the Time 1 predictor. The importance of the FWS was however significantly related to negative feedback seeking at Time 2. Contrary to my expectations the relationship was negative ($\beta = -.25, p < .05$), indicating that a FWS the individual was more committed to bringing about led to less negative feedback seeking. This contradicts the cross-sectional results described in Chapter 4, where I found a significant positive relationship between the importance of the FWS and negative feedback seeking via an instrumental motive⁵⁷. In the longitudinal sample the present chapter is based on, the importance of the FWS at Time 1 was not significantly related to an instrumental feedback seeking motive at Time 2, after controlling for the Time 1 predictor ($\beta = .07, n.s.$). Overall, there was no significant mean difference between negative feedback seeking at Time 1 and at Time 2 ($t(66) = -1.26, n.s.$). In summary, perceiving one's FWS as very important did not lead to an increased awareness of the instrumental value of critical feedback and had a negative

complex self-concept, a person's temporary self-evaluation (e.g., their negative self-evaluation based on a failure) should spread less to the total of the self-concept.

⁵⁷ An instrumental feedback seeking motive reflects individuals' desire to gain useful information on their performance (Ashford & Cummings, 1983). Following an underlying instrumental motive, individuals seek feedback because they acknowledge that it helps them to improve their performance and pursue their goals (see 4.2.1 for a detailed discussion).

effect on negative feedback seeking over time. A high level of commitment to one's future self seems to over time lead to a decrease in the seeking of negative feedback.

One possible explanation for this finding is that as they progress towards the FWS that is highly important to them, individuals become less open to challenges to their ideas and to critical feedback. This is supported by research on the temporal focus of goals. Goals at a greater distance make it easier for individuals to take risks. Distance affords individuals greater opportunity for taking risks and making mistakes because it provides some latitude for correction – “a cushion of resources” (Pennington & Roese, 2003, p. 572). As time passes and their desired future becomes less distant, individuals may become more reluctant to see their present path challenged and their performance questioned. To explore this idea, I investigated the effect of the temporal distance of the future self. After controlling for age, gender, the year of study, and negative feedback seeking at Time 1, the temporal distance of the future self explained a significant amount of variance in negative feedback seeking at Time 2 ($F = 9.90, P, .001, R^2 = .49, \Delta R^2 = .14$). The temporal distance of the future self at Time 1 was significantly related to negative feedback seeking at Time 2 ($\beta = .44, p < .001$)⁵⁸. This finding provides some initial support for the idea that a future self at a greater temporal distance may afford individuals greater opportunity for taking risks as it provides some latitude for correction. The temporal distance of the future self did however not interact with its perceived importance ($\beta = -.12, n.s.$)

6.5.3 Job role negotiation

As with the two other proactive P-E fit behaviours, the FWS variables did not explain a significant amount of variance in job role negotiation, once the Time 1 predictor had been controlled for. However, the accessibility of the FWS at Time 1 was significantly related to job role negotiation at Time 2, after controlling for the Time 1 predictor ($\beta = .24, p < .05$). This finding suggests that those who have a clear image of their FWS that easily comes to mind increasingly negotiate the direction of

⁵⁸ The cross-sectional relationship between negative feedback seeking at Time 2 and the temporal distance of the future self at Time 2 was not significant ($\beta = -.14, n.s.$) after controlling for Time 1 temporal distance and feedbacks seeking.

their research, their responsibilities and the demands placed upon them with their supervisor. It supports the idea that an accessible image of one's FWS can motivate attempts to shape one's environment.

Above, I have argued that job role negotiation can be seen as aimed at changing the environment in order to achieve a better fit with one's values, goals, and interests (S-V fit) based on literature on organizational socialization and the adjustment to new and changing work roles (e.g., Ashford & Black, 1996; J. S. Black & Ashford, 1995; Dawis et al., 1964; Dawis & Lofquist, 1978; Nicholson, 1984). However, it is also possible that job role negotiation is aimed at achieving a better fit between one's resources and the demands of the environment. The postgraduate research students in the present sample may negotiate the direction of their research with their supervisor to achieve a better fit with their interests and values, and their hoped for future field of work. They may also negotiate the demands placed upon them and attempt to manage their work load and tasks in order to achieve and maintain congruence with their resources and abilities. Future work may address the relationship between job role negotiation and different types of P-E fit.

6.5.4 Limitations

While P-E fit served as an overarching theoretical framework in this chapter, it was not the focus of the empirical study. Future research will need to explore the effect of different P-E fit proactivity behaviours on S-V and D-A fit.

In addition, it remains uncertain whether these proactive behaviours are indeed aimed at achieving future P-E fit as I have argued above. While proactive career behaviour is likely to be aimed at shaping one's future environment or increasing one's abilities required in the future, the future focus of job role negotiation and feedback seeking is less clear. Future research which focuses more explicitly on P-E fit as an outcome of proactive behaviours will have to address the temporal focus of different dimensions of P-E fit.

The results of the present study need to be interpreted with caution, as the FWS variables did not predict significant amounts of variance in any of the dimensions of P-E fit proactivity at Time 2, after the Time 1 predictors had been controlled for (with the exemption of proactive skill development, see above).

Due to the small sample low statistical power is a major concern in this study. Statistical power refers to “the ability of a statistical test to detect possible population effects” (Austin, Boyle, & Lualhati, 1998, p. 166). When power levels are low, Type II (β) error rates increase. Type II errors occur when the null hypothesis is retained based on non-significant results, while the effect in fact holds in the population (Neyman & Pearson, 1933). Just as Type I error, Type II error can accumulate. To counteract Type II error accumulation, Westermann and Hagen (1986) recommend the a priori estimation of power/N.

As I have outlined in the method section, the present study was not originally conceptualized as longitudinal, and participants did not initially commit to taking part in longitudinal research which may explain the relatively low case number of 82. For the uncertainty in the FWS narrative, the number of cases was 65 as not all narratives allow for the rating of uncertainty⁵⁹. Based on Cohen (1988), the detection of a medium size effect in a multiple regression with seven predictors requires an optimal sample size of 102. The given sample size in this study would only detect large effects. Similarly, the zero-order correlations are low on power. An optimal sample size of 64 will detect medium size effects, the optimal sample size for small effects (given $\alpha = .05$) is 614 (Cohen, 1988). Because of the small sample size, small effects may not have been detected (e.g., $r = -.25$, *n.s.*, between uncertainty in the FWS narrative at Time 1 and proactive career behaviour at Time 2). This research is however exploratory and in the Discussion section above I discuss near significant effects.

A further limitation is the relatively low interrater reliability of the uncertainty ratings of the FWS narratives. With .67 for Time 1 and .63 for Time 2, these are below the cut-off of .70 generally deemed acceptable (Krippendorff, 2004). Future research may further refine the rating system for the FWS narratives in order to achieve higher interrater reliabilities.

⁵⁹ The coder ratings of uncertainty expressed in the FWS narrative relied heavily on the verbs used. Expressions such as “I am” or “I will be” were coded as expressing less uncertainty than expressions such as “I would be” or “I could be”. The coding guide is described in detail in Chapter 4, and can be found in the Appendix.

Finally, the postgraduate research students who took part in both studies held FWS that were more accessible and were able or willing to provide more elaborate FWS narratives. This self-selection process may have led to a sample that is not representative of the whole population of postgraduate research students, and may have caused range restriction in the future self variables (Sackett & Yang, 2000). As a result, the reliance on a sample with mainly highly accessible FWS may have led to a more conservative test of the hypotheses.

6.5.5 Implications

The negative relationship between uncertainty and career planning and proactive skill development may be indicative of a problematic development. Postgraduate research students who do not know what they would like their future to be like and are not confident the future they image will become reality are less motivated to plan the next steps of their career and to develop skills they may require in the future. One may have expected that an uncertain FWS may lead to increased exploration over time. Study participants who produced a very uncertain FWS narrative at Time 1 may over the next six months have explored their career options. They may have sought more advice from supervisors and senior colleagues, and may have tried to increase their skills in order to feel more confident and certain about their future. However, the opposite seems to be the case. A highly uncertain FWS does not seem to motivate increased consultation or career planning over time. Not knowing what one wants one's FWS to be like and feeling uncertain about one's prospects for the future is associated with less proactive skill development, which seems to reflect a negative trend.

Proactive career behaviours are likely to have a reciprocal relationship with the future work self⁶⁰. An elaborate, concrete FWS narrative the individual feels certain about is likely to be the result of continued exploration (e.g., Berzonsky, 1992b; Grotevant, 1987; Marcia, 1966), including activities such as consultation, networking, and the identification of role models (Ibarra, 1999). Proactive career

⁶⁰ In the present study, there are however no significant relationships between proactive career behaviours at Time 1 and the characteristics of the FWS narrative at Time 2, after controlling for the characteristics of the FWS narrative at Time 1.

development may afford individuals with opportunities for exploring their future self. The findings of the present study however suggest that less certain FWS are associated with lower levels of proactive career behaviour, potentially resulting in fewer opportunities for individuals to explore and consolidate their future-oriented professional identity.

Future selves and self-focused imagery have been suggested as a useful tool in career counselling (e.g., Fletcher, 2000; Krieshok et al., 1999; Meara et al., 1995; Plimmer & Schmidt, 2007). The findings of this study provide further support for this idea and suggest that individuals do not necessarily seek advice on career issues and aim to make plans if they feel uncertain about their potential future career.

As noted in Chapter 5, the responsibility for the acquisition of skills and resources that will ensure future employability largely lies with the student (Craswell, 2007; Metcalfe & Gray, 2005). Skill development initiatives within doctoral education rely on the individual student to identify and address skill gaps. My findings suggest that doctoral students with a more certain FWS may make more use of these initiatives, while those with vague and highly uncertain FWS are less likely to expose themselves to career development initiatives. Higher education institutions may wish to more specifically target students who are unlikely to take charge of their own skill development and career management.

Finally, the temporal distance of the FWS emerged as a significant predictor of negative feedback seeking over time. This supports the idea that goals at a greater temporal distance are associated with more risk taking (Pennington & Roese, 2003), and provides some initial support for the usefulness of a FWS that is focused on the distant rather than the near future. While the temporal distance of the future work self has not been the focus of this study, it may prove a fruitful area for future research.

7 Chapter 7 –

Beyond hope: Avoidance in FWS narratives, and the relationship between FWS and affect

In Chapter 5 and 6, I have explored the relationship between the characteristics of the FWS narrative, and proactive behaviours and -goals. The purpose of this chapter is twofold. I will first focus on the reciprocal relationship between the FWS narrative and affect. In addition, this chapter will also focus more explicitly on the content of the FWS narratives and will explore the relationship between reflections of feared components in the FWS and proactive behaviour.

7.1 Hoped for future selves and affect

Mental simulation of one's life goals becoming reality may be beneficial to motivation and performance (Pham & Taylor, 1999), and facilitate planning and the setting of proactive goals, as I have discussed in detail in previous chapters. In the present chapter I explore a more indirect influence of FWS on proactivity. As I have argued in Chapter 2, FWS can instil feelings of hope and optimism and more generally of positive affect, which in turn can motivate proactive behaviour.

Affect is likely to have a reciprocal relationship with the FWS. The generation of positive emotions is one possible mechanism through which FWS can promote proactivity. While negative emotions narrow individuals' focus of attention (see Easterbrook, 1959, for a review)⁶¹ and activate dominant, well-rehearsed reactions (e.g., Davitz, 1952), positive emotions broaden the momentary thought-action repertoire and "prompt individuals to discard time-tested or automatic (every day) behavioral scripts and pursue novel, creative, and often unscripted paths of thought and action" (Fredrickson, 1998, p. 304). Thus, positive affective states are likely to encourage engagement in proactive behaviour (Den Hartog & Belschak, 2007; Parker, 2007b; Parker et al., forthcoming).

⁶¹ See also Derryberry and Tucker (1994) for a review of empirical support for the narrowing effect of negative emotions on the focus of attention

Previous research on hoped for future selves and affect has focused on their potential benefit for individuals' subjective well-being (Sheldon & Lyubomirsky, 2006), and even physical health (L. A. King, 2001). In previous research, writing about hoped for future selves (also called "best possible selves" (L. A. King, 2001, p. 800)) has been shown to have a positive effect on consecutive affect⁶² (L. A. King, 2001; Sheldon & Lyubomirsky, 2006). Beyond the benefits of disclosive writing itself for well-being, emotional adjustment, and health (see e.g., Frattaroli, 2006, for a meta-analysis), imagining one's life goals become reality is likely to improve self-regulation by affording the opportunity "to learn about oneself, to illuminate and restructure one's priorities, and to gain better insight into one's motives and emotions" (Sheldon & Lyubomirsky, 2006, p. 75). Another proposed benefit of writing about life goals is its potential to reduce goal conflict (Pennebaker, 1998). It may allow individuals to gain a feeling of control (Lyubomirsky, Sousa, & Dickerhoof, 2006).

Two longitudinal studies have investigated the effects of visualizing hoped for future selves and writing about them, respectively, in samples of undergraduate psychology students.

King (2001) conducted an intervention study among a sample of 81 undergraduate students and compared the effects of writing about one's hoped for future self to writing about one's most traumatic life event (as well as a non-emotional control topic). Writing about one's hoped for future self was associated with a significant increase in net positive mood⁶³ over three weeks. Both writing interventions were associated with a decrease in illness after a five months period.

⁶² As Watson, Clark, and Tellegen (1988) put it, **positive affect (PA)** "reflects the extent to which a person feels enthusiastic, active, and alert. High PA is a state of high energy, full concentration, and pleasurable engagement, whereas low PA is characterized by sadness and lethargy" (p. 1063). **Negative affect (NA)** on the other hand is "a general dimension of subjective distress and unpleasurable engagement that subsumes a variety of aversive mood states, including anger, contempt, disgust, guilt, fear, and nervousness, with low NA being a state of calmness and serenity." (p. 1063).

⁶³ Net positive mood was calculated by subtracting negative affect (NA) from positive affect (PA), see King, 2001, p. 803. Although measures of NA and PA tend to be moderately correlated

Sheldon and Lyubomirsky (2006) investigated the effects of visualizing hoped for future selves in 23 psychology undergraduate students who were instructed to visualize their “best possible self” and write about it (p. 75). Students rated how often they had actually performed the exercise over a period of four weeks. Visualizing one’s hoped for future self lead to an increase in positive affect (PA) and a decrease in negative affect (NA) compared to a control condition. The beneficial effects of the exercise were contingent on participants’ self-concordant motivation. Thus, there is some empirical support for the positive effect of hoped for future selves on consecutive affect.

On the other hand, affect is likely to influence the content and characteristics of the FWS. Affect can influence the value individuals place on an outcome, as well as their expectancies (Erez & Isen, 2002). Positive affect can motivate individuals to set more difficult and challenging goals (Ilies & Judge, 2005), and is thus likely to influence the content of the FWS. Affect can also influence the accessibility of hoped for and feared FWS, as positive affect cues positive material in individuals’ memory (e.g., Isen, Shalcker, Clark, & Karp, 1978; Teasdale & Fogarty, 1979).

7.2 Approach versus avoidance motivation

While the future work self is conceptualized as an ideal, hoped for future self and constitutes an approach goal, it may also contain accounts of what one is motivated to avoid. Approach motivation refers to self-regulation in which behaviour is prompted and sustained by a positive and desirable outcome the individual aims to move towards. In avoidance motivation, behaviour is motivated by an undesirable, negative outcome or state the individual aims to move – or stay – away from (Elliot, 1999). This fundamental distinction can be traced back to the very beginning of psychology (James, 1890; see Elliot & Trash, 2002) and has been applied widely in social and personality psychology (e.g., Atkinson, 1964; Bandura, 1986; Carver & Scheier, 1981, 1990b; Higgins et al., 1994; Lewin, 1951). For example, control theory (Carver & Scheier, 1981, 1982, 1990a, 1990b, 1998) postulates self-regulatory systems with positive versus negative reference values. Self-regulation

(e.g., Watson et al., 1988), NA and PA are commonly conceptualized as independent dimensions (Tellegen, 1985; Watson & Clark, 1984; Watson et al., 1988).

involves reducing the discrepancy between the present state and a positive, desired reference point; as well as enhancing the discrepancy between the present state and a negative, undesired reference point. Drawing on control theory, self-discrepancy theory (e.g., Higgins, 1987, 1989; Higgins, 1998; Higgins et al., 1994) distinguishes between two types of desired selves (ideal and ought, see also 2.2.3 for a detailed discussion), and correspondingly between ideal and ought self-regulation. Ideal self-regulation is associated with strategies involving approaching a match with a desired state of the self, while ought self-regulation is associated with strategies that involve avoiding a mismatch with a desired state of the self (Higgins et al., 1994). Ideal selves have a promotion focus and are concerned with advancement, accomplishment, hopes, and aspirations, while ought selves have a prevention focus, a concern with protection, safety, duty and responsibilities (Higgins, 1998).

Self-regulation based on negative reference values has been suggested to be inherently unstable and relatively rare (Carver & Scheier, 1981, 1990b). Elliot, Sheldon, and Church (1997) find that the pursuit of avoidance goals leads to low perceptions of goal progress and suggest that the focus on negative possibility is inherently associated with feelings of threat, worry, and anxiety. The successful avoidance of a negative state might also be more difficult to detect; and a negative outcome is less likely to be effective at keeping the individual focused in a specific direction (Elliot et al., 1997). Consequently, personal projects (Little, 1983, 1989), -strivings (Emmons, 1996; Emmons & McAdams, 1991), or -goals (Roberson, 1990) with negative reference values are likely to be less effective in regulating behaviour.

Individuals differ in the extent to which they set themselves approach- or avoidance goals. Avoidance goals can be linked to underlying motive dispositions (Elliot & Church, 1997; Elliot & Sheldon, 1997; Emmons & McAdams, 1991), as well as personality factors (Elliot et al., 1997; Elliot & Trash, 2002). Elliot, Sheldon, and Church (1997) proposed that neuroticism, either alone or in interaction with extraversion, as well as low perceptions of life skills, i.e., self-regulatory and social competencies required for the effective negotiation of everyday life (Sheldon & Kasser, 1998), would predict avoidance goals. In their study, neuroticism evolved as a significant antecedent of avoidance goals, while neither extraversion nor the interaction between neuroticism and extraversion were significant. Participants' perceptions of their self-regulatory skills, but not of their life skills, significantly

predicted their avoidance goals; participants with higher levels of perceived self-regulatory skills were pursuing fewer avoidance goals.

Elliot and Trash (2002) proposed a "general neurobiological sensitivity" (p. 805) to either positive and desirable, or negative and undesirable stimuli, which is reflected in the broad concepts of approach and avoid temperament. Approach temperament is the core shared by the concepts of extraversion, positive emotionality, and the behavioural activation system that produces positive affect and facilitates behaviour (Gray, 1970). Avoidance temperament underlies the concepts of neuroticism, negative emotionality, and the behavioural inhibition system. In a series of 3 studies, the behavioural activation system, extraversion, and positive emotionality predicted mastery and performance-approach goals and were unrelated to performance-avoidance goals. The behavioural inhibition system, neuroticism, and negative emotionality were positive predictors of performance-approach and performance-avoidance goals and were unrelated to mastery.

7.3 Hoped for and feared future selves

In 1986 their seminal paper, Markus and Nurius distinguish between expected possible selves, the selves we think we will become, hoped for possible selves, the selves we would like to become, and feared possible selves which reflect what we are afraid of becoming. Below, I review research on the effects of feared selves on individuals' affect, before outlining the literature on the effects of corresponding feared and hoped for future selves.

Ogilvie (1987) contrasts ideal (current) selves with feared (called "undesired" in this line of research) selves and proposes that feared selves are more experience- and memory-based, and as a consequence more concrete and less conceptual than the ideal self; he provides some preliminary evidence based on ratings of 20 judges who rated participants' ideal and feared future selves in terms of their concreteness. Based on findings of an unpublished case study (Ogilvie & Lutz, 1984), he proposed that the discrepancy between the current self and the feared self will have a stronger influence on individuals' subjective well-being than the discrepancy between the current self and the ideal self. While individuals seem to believe that their happiness in life depends more strongly on their progress towards their ideal self than on their success in increasing the distance to their feared self (Ogilvie, 1987), empirical

findings seem to suggest a stronger effect of the feared self⁶⁴. In a sample of 45 undergraduate psychology students, Ogilvie found the relationship of students' life satisfaction with the discrepancy of the current self and the ideal self to be significantly weaker than the relationship with the discrepancy of the current self and the feared self ($r = .37, p < .05$, and $r = -.67, p < .001$, respectively). In a regression analysis, the discrepancy between the current and feared self explained a significantly higher proportion of variance in students' life satisfaction. He proposed that the ideal self may in fact be derived from and formulated in response to one's feared self.

Carver, Lawrence, and Scheier (1999; see also Carver & Scheier, 1998) proposed that feared selves generate a relatively directionless avoidance motivation where any movement that increases the distance between the feared self and the current self is valued. Feared selves can lead to the creation of corresponding ought selves⁶⁵ that "incorporate the important feature of being incompatible with the feared self" (p. 785). Depending on the current distance of the present self from the feared self, different motives are likely to be salient. When individuals feel they are close to a feared self, escape is the salient motive. When the distance from the feared self is large, escape may be less salient and ought selves may be more salient. The authors find support for this hypothesis in a sample of 85 undergraduate students. Discrepancies between the current- and ought self had a stronger effect on agitation-related affect (i.e., feelings of guilt and anxiety) when the discrepancy between the current and feared self was large than when it was small. Only when individuals perceive their current self to be highly discrepant from their feared self, the discrepancy from the ought self becomes a significant predictor of their feelings of anxiety and guilt. In addition, discrepancies from feared selves had a stronger effect on feelings of anxiety and guilt than discrepancies from ought selves. Both ought and feared discrepancies uniquely predicted depression and happiness.

⁶⁴ See e.g., Baumeister, Bratslavsky, Finkenauer, and Vohs (2001) for a review of the general hypothesis that "bad is stronger than good" (p. 325).

⁶⁵ While ideal selves reflect individuals hopes, wishes and aspirations, ought selves reflect their concern with duty and responsibilities (Higgins et al., 1994).

Heppen and Ogilvie (2003) aimed to replicate Carver et al.'s findings, and found a significant interaction effect in a sample of 82 undergraduate students. They again found discrepancies from feared selves to be strong and unique predictors of both agitation-related feelings of anxiety and guilt, and dejection-related feelings of depression and happiness.

Using a latent variable approach, Phillips, Silvia, and Paradise (2007) also found no significant relationship between ought- and ideal self discrepancies and negative emotions in sample of 231 students once feared self discrepancies had been taken into account. When self-esteem was included in the model, the paths between all three types of self-discrepancies and negative emotions became non-significant, suggesting that self-esteem acts "as a third-variable that explained the relationship between specific self-beliefs and global emotions" (p. 1044)⁶⁶.

In sum, this line of research supports the relationship between hoped for future selves and individuals' well-being and affect. Discrepancies between current and feared selves have however been shown to have a stronger effect on individuals' affect than discrepancies between current and hoped for selves.

It is important to note that these studies do not explicitly distinguish between future-oriented and current self-standards. As described in 2.2.1, the present self can however be compared to two types of reference points (Boldero & Francis, 2000, 2002). *Standards* are desirable states for the self in the present. A discrepancy between the current self and a desirable current state will be associated with negative emotions, which will be stronger if the discrepancy is larger. Congruence between the current self and a standard will result in positive emotions and attempts to maintain this congruence. *Goals* on the other hand are reference values which represent desirable future states. As such, they are by definition discrepant from the current self, and discrepancies do not necessarily lead to negative affect. The experienced emotion is unlikely to be related to the magnitude of the discrepancy, but rather to the progress being made towards the desired future state. Following this distinction, future selves represent (higher-level) goals rather than standards, and the

⁶⁶ However, as pointed out by the authors the very high relationship between self-esteem and negative emotions ($\beta = -.81, p < .001$) suggests the potential presence of common method bias and conceptual overlap.

discrepancy between a current self and a desirable future self will not necessarily lead to negative affect. Individuals' affective reactions to a discrepancy between their present self and their future work self are more likely to depend on the progress they perceive to be making towards their desired future, and on their perceived ability to bring it about.

This is consistent with findings by King, Richards and Stemmerich (1998) who investigated the effect of feared future selves on individuals' well-being more indirectly and found that the pursuit of daily goals aimed at avoiding one's feared future selves was negatively associated with life satisfaction and subjective well-being, and positively related to depression, while the pursuit of daily goals linked to one's hoped for future selves had only very weak relationships with these three outcome variables. In addition, avoidance of feared future selves interacted with daily goal appraisal. Individuals who perceived little progress towards their daily goals aimed at avoiding their feared future self experienced the lowest levels of subjective well-being. Goal progress rather than goal discrepancy seems to determine the effect of feared future selves on affect.

The research reviewed above focuses on differential effects of feared and hoped for selves. In contrast Oyserman and colleagues (Oyserman et al., 2004; Oyserman & Markus, 1990; Oyserman & Saltz, 1993; Oyserman et al., 2002) propose that future selves reach maximal motivational effectiveness when desired future selves⁶⁷ are offset by a compensational feared future self in the same domain. For example the future self of expecting to attain a faculty position would be considered balanced if the individual held a feared future self of being unemployed at the same time. Oyserman and Markus (1990) propose that desired future selves may be competing with alternative short-term possible selves. Matched feared future selves may then be recruited to strengthen one's motivation to achieve the hoped for future. Relevant feared selves "provide for persistence in the pursuit of a desired possible self" (p. 123). Similarly, a hoped for future self should enhance the

⁶⁷ Oyserman and Markus (1990) distinguish between expected selves that could actually occur and are based on realistic expectations, and hoped for selves that were generated regardless of how likely they were. I argue that it is unlikely for individuals to hold a future self they do not believe can become reality, and refer to desirable future selves as "hoped for".

motivation to avoid a feared future self⁶⁸. In a sample of 101 13 to 16 year old delinquent and non-delinquent pupils, they found that 33% to 37% of officially delinquent youth held a feared self of becoming criminal⁶⁹. In contrast to the feared selves of non-delinquent pupils, these feared selves were however not matched with expected selves focusing on avoiding crime and having a job or getting along well in school. Future selves need to “balance positive expectations with concerns” in order to provide an effective basis of self-regulation (Oyserman et al., 2004, p. 145).

While Oyserman and colleagues report empirical support for a stronger effect of balanced future selves on individuals' self-regulation (Oyserman et al., 2004; Oyserman & Markus, 1990; Oyserman & Saltz, 1993; Oyserman et al., 2002), others argue that these tests of the balance hypothesis were statistically confounded, and point out that the authors failed to control for the main effects of hoped for and feared future selves when testing the interaction term (Quinlan et al., 2006). Oyserman and colleagues' research mainly focuses on the effects of balanced future selves on self-regulation rather than on affect. Smith and Freund (2002) investigated future selves in a longitudinal sample of 206 adults aged between 70 and 103, and found that almost every participant held at least one balanced (or matched) future self within the two time points⁷⁰. In this study, balance in future selves was operationalized as “the presence of a hope and a fear in the same content domain” (p. 499). Over the four years between the two data collections balance in future selves showed relatively low stability. Contrary to the authors' expectation, the life satisfaction and well-being of participants who gave up a match between a hoped for and a feared future self in the domain of health declined to a smaller extent than that of participants who maintained a balanced future self in this domain. The authors

⁶⁸ C.f. Carver, Lawrence, and Scheier (1999; see also Carver & Scheier, 1998) who propose that feared (current) selves generate a relatively directionless avoidance motivation that is given direction by a desired self that instils an approach tendency. Depending on the current discrepancy between the actual self and these feared and hoped for selves, different motives dominate individuals' self-regulation, as discussed in more detail below.

⁶⁹ Balance in possible selves was operationalized by joint scorings of two coders who scored the number of pairs of expected and feared selves that represented aspects of the same content area.

⁷⁰ In their study, participants were asked to report up to two hoped for and feared future selves, respectively.

propose that maintaining health-related balanced future selves may be more a reflection of rumination and chronic worry than a motivational force. In line with this idea, individuals with a high number of interrelated future selves have been shown to react more strongly to negative life events (Niedenthal et al., 1992).

In sum, previous research on the effects of feared future selves provides mixed results. Below, I will discuss the methodical approach previous research has taken to assessing feared and hoped for future selves and outline the focus of the present study on feared components in FWS narratives.

7.4 Avoidance in FWS narratives

Research on future selves that has focused on selves individuals are motivated to avoid has explicitly contrasted hoped for future selves with feared future selves. For example, Laura King and colleagues asked participants to list their worst fears for their life (L. A. King et al., 1998; see p. 721) in addition to their life goals. In her widely used Possible Selves questionnaire (Oyserman et al., 2004; Oyserman & Fryberg, 2006; Oyserman & Markus, 1990; Oyserman & Saltz, 1993; Oyserman et al., 2002; see Chapter 2 for a detailed discussion on methodological choices in the assessment of future selves), Daphna Oyserman instructs participants to list up to four concerns or selves to be avoided in addition to up to four expected selves. Similarly, Cross and Markus (1991) asked participants to list hoped-for and feared possible selves they were currently imagining for themselves on two sets of lines. Depending on their age, participants provided between 7.6 and 5.7 hoped for possible selves, and between 5.1 and 3.1 feared selves.

Research on regulatory goal focus however suggests that individuals may differ in their focus on selves they desire or wish to avoid (e.g., Higgins, Shah, & Friedman, 1997; Idson, Liberman, & Higgins, 2000). Instructions that explicitly contrast hoped for future selves with selves to be avoided may mask the true nature of the phenomenon. In this study I take a different approach to feared future selves and focus on avoidance in hoped for future self narratives. FWS narratives are likely to differ in the degree to which they contained accounts of a future self the individual did *not* want to become. This approach allows room for individual differences in focusing on avoiding feared selves.

7.5 Hypotheses

In previous chapters I have discussed the self-rated characteristics of FWS and the characteristics of FWS narratives in detail. In this chapter I explore the relationship between individuals' affect and three different aspects of the FWS: its accessibility in the working memory as a self-rated characteristic that is likely to mediate the influence of a FWS on behaviour; its uncertainty, the degree to which the FWS narrative reflects uncertainty about what one would like one's future to be like and about whether it is likely to become reality⁷¹; and its degree of avoidance, the extent to which the FWS narrative reflects a feared future self the individual is motivated to avoid.

In order for a FWS to enhance positive affect by affording individuals with the opportunity to reduce goal conflict (Pennebaker, 1998) and gain a feeling of control over their future (Lyubomirsky et al., 2006), and by instilling feelings of hope and optimism (Oyserman et al., 2004), it needs to be accessible in the memory.

H1a: The accessibility of the FWS will be positively associated with positive affect, and negatively associated with negative affect.

Drawing on self-clarity literature, I propose that uncertainty in FWS narratives is likely to relate to affect. Self-concept clarity refers to the extent to which self-views are well-defined, certain, temporally stable, and internally consistent (J. D. Campbell et al., 1996). Trait self-concept clarity has been shown to be positively related with positive affect, and negatively with negative affect (J. D. Campbell et al., 1996), and increases in self-concept clarity have been shown to lead to increased positive affect (Baumgardner, 1990). Nezelek and Plesko (2001) found the relationship between daily events and self-concept clarity to be mediated by changes in mood and self-esteem. While negative affect should be related to self-concept clarity "because the two constructs share features such as doubt, confusion, and anxiety" (Nezelek & Plesko, 2001, p. 202), the theoretical arguments behind the relationship between self-concept clarity and positive affect are however less clear,

⁷¹ See 5.2 for a more detailed discussion of the non-linear nature of uncertainty in FWS narratives.

and findings regarding this relationship are less consistent (c.f. Lavalee & Campbell, 1995).

Uncertainty of FWS can be seen as reflecting the clarity of the future-oriented self-concept, its certainty and definition. Similar to an uncertain present self-image, an uncertain future self is likely to be associated with negative affect, following the rational provided above for the link between self-concept clarity and negative affect.

Support for this idea also comes from research on identity formation and status⁷². For example, Waterman (2007) reports positive relationships between individuals' identity achievement status and subjective, psychological, and eudaimonic⁷³ well-being.

More generally, uncertainty about one's future self may reflect a perceived lack of control over one's life (c.f. Levenson, 1974; Rotter, 1966) which has negative effects on individuals' physical and psychological health (e.g., Kobasa, Maddi, & Kahn, 1982; Rodin, 1986; Rodin, Timko, & Harris, 1985). In sum, I propose:

H1b: The degree of uncertainty reflected in the FWS narrative will be negatively associated with positive affect, and positively associated with negative affect.

Finally, I propose a negative effect of avoidance in FWS narratives on individuals' affect as well as their proactive attempts to bring about their desired future. As discussed above, previous research has found the pursuit of avoidance goals associated with low perceptions of goal progress (Elliot et al., 1997) and

⁷² There is considerable overlap between the concepts of identity, self-concept, or self-identity, and these terms are often used interchangeably (e.g., Oyserman, 2004). See e.g. Baumeister (1999) for a discussion of conceptual divergence. Baumeister argues that identities "may contain material that is not part of the self-concept, because identity is not fully contained inside the person's own mind" (p. 248). He argues that newborn babies may not have a self-concept (that is, self-knowledge), but they do have an identity as they have a name and are part of a family.

⁷³ Eudaimonic well-being "focuses on meaning and self-realisation and defines well-being in terms of the degree to which a person is fully functioning" (Ryan & Deci, 2001), and can be distinguished from hedonic well-being which focuses on happiness (see Waterman, 1993). On the level of personal experience, eudaimonic well-being is characterized by feelings of engagement, while hedonic well-being is characterized by feelings of pleasure (e.g., Hofslott Kopperud & Vittersø, 2008).

proposed that they are inherently associated with feelings of worry, anxiety, and threat.

H1c: Avoidance in the FWS narrative will be negatively associated with positive affect, and positively associated with negative affect.

In addition, self-regulation theory proposes that negative reference values provide an unstable motivational basis (Carver & Scheier, 1981, 1990b). A negative outcome may be less likely to be effective at keeping the individual focused in a specific direction, and thus less effective at regulating behaviour.

H2: Avoidance in FWS narratives will be negatively associated with proactive skill development and networking.

7.6 Method

7.6.1 Procedure and measures

As described in previous chapters, data were collected from postgraduate research students who participated in a web-survey at Time 1, and 6 months later at Time 2.

Positive (Time 1: $\alpha = .78$; Time 2: $\alpha = .82$) and *negative affect* (Time 1: $\alpha = .75$; Time 2: $\alpha = .74$) were measured using the I-PANAS-SF⁷⁴, an internationally reliable 10-item version of the Positive and Negative Affect Schedule (Watson et al., 1988) developed by Thompson (2007). An example item for positive affect is “(Over the last few weeks, to what extent did you feel...) inspired”. An example item for negative affect is “(Over the last few weeks, to what extent did you feel...) upset”.

7.6.2 Sample

As described in 6.3, I compared the final longitudinal sample to the students who had participated in Study 1 (Time 1), but not 6 month later in Study 2 (Time 2). There were no significant differences in age ($F(1,313) = 1.88, n.s.$), year of study ($F(1,305) = 1.02, n.s.$), and mode of study ($F(1,313) = .72, n.s.$). However, there were differences in gender with a higher percentage of female students in the longitudinal

⁷⁴ Sheldon and Lyubomirski (2006) also used the PANAS to operationalized state affect in their intervention study investigating the effect of imagining a hoped for future self, but used the longer 20-item version originally developed by Watson and colleagues (1988).

sample ($F(1,313) = 3.89, p < .05$). This sample did not differ from the sample at Time 1 in terms of positive affect ($F(1,312) = 1.03, n.s.$), but reported lower negative affect ($F(1,312) = 1.98, p < .05$). Participants in the longitudinal sample also reported a higher accessibility of their future work self ($F(1,313) = 7.79, p < .01$), and produced more elaborate future work self narratives ($F(1,249) = 9.33, p < .01$). Differences in any other characteristics of the future work self, or in participants' self-rated proactive behaviours were not significant. As mentioned previously, students who participated in both studies were more conscientious ($F(1,308) = 6.26, p < .05$), agreeable ($F(1,308) = 8.82, p < .01$), and open to experience ($F(1,308) = 11.45, p < .01$). These differences limit the generalizability of the results of the longitudinal sample, as was discussed in more detail in 6.5.4.

The levels of positive affect in the present sample did not differ significantly from Watson et al.'s (1988) original sample of undergraduate psychology students (Time 1: $t(127) = -.85, n. s.$; Time 2: $t(174) = .15, n. s.$) but were significantly higher than the levels of Crawford and Henry's (2004) normative sample of over 1000 adults of the general non-clinical population at Time 1 ($t(116) = -2.04, p < .05$), but not at Time 2 ($t(156) = -1.08, n. s.$) Negative affect in the present sample was higher than in Watson et al.'s sample (Time 1: $t(124) = -2.32, p < .01$; Time 2: $t(168) = -3.76, p < .001$), and Crawford and Henry's normative sample (Time 1: $t(103) = -7.43, p < .001$; Time 2: $t(137) = -9.30, p < .001$). Exploring the levels of positive and negative affect in the present sample seemed relevant as previous research on postgraduate research students' health shows a high propensity for this population to experience high levels of distress. Research on the well-being of postgraduate research students is rare as studies on student well-being often fail to distinguish between undergraduate students and doctoral students (e.g., Pledge, Lapan, Heppner, Kivlighan, & Roehlke, 1998; Westefeld & Furr, 1987), or have focused exclusively on doctoral students in psychology (e.g., Nelson, Dell'Oliver, Koch, & Buckler, 2001), or medicine (e.g., Givens & Tjia, 2002; Toews et al., 1997). However, some previous studies show high levels of emotional distress among doctoral students. Hyun and colleagues (Hyun, Quinn, Madon, & Lustig, 2006, 2007) found that 44.7% of the graduate students who participated in their study reported having had an "emotional or stress-related problem" over the previous year (Hyun et al., 2006, p. 255), with domestic graduate students scoring higher on a 5-item depression index

score than international students (Hyun et al., 2007). The higher levels of negative affect in the present sample in comparison to a normative sample of non-clinical adults (J. R. Crawford & Henry, 2004) are consistent with these findings.

The longitudinal auto-correlations of the I-PANAS scales over the 6 months period were .48 ($p < .001$) for positive affect and .49 ($p < .001$) for negative affect, which is similar to the 8-week retest reliability reported by Watson et al. (Watson et al., 1988) for the original scales (PA: $r = .58$, NA: $r = .48$).

7.6.3 Rating uncertainty in FWS narratives

As described in 5.2.3 in detail, FWS narratives were independently rated by two trained raters in terms of their uncertainty, the degree of doubt and insecurity about the FWS. Highly certain narratives reflect a future self one is sure of becoming. Moderately uncertain FWS narratives contain some image of what participants would like their future self to be, but express uncertainty about this future becoming reality. Individuals with highly uncertain future selves are not sure about what they would like their future to be like. A copy of the code book can be found in the Appendix. Interrater reliabilities for uncertainty were .67 for Time 1 and .63 for Time 2, which is slightly lower than the cut-off of .70 proposed by Krippendorff (2004). Ratings were averaged over the two raters. The relatively low interrater reliability will be discussed as a limitation of the present study below.

7.6.4 Coding avoidance in FWS narratives

7.6.4.1 Coder ratings

As described in detail in 5.2.3, two occupational psychology graduates were recruited and trained as raters using data from a pilot study.

Avoidance in the FWS narrative was coded as the presence or absence of accounts of something the individual wants to avoid in the FWS narrative. Negations served as a cue indicating something the individual wanted to avoid. A similar procedure is used to score activity inhibition, the tendency to restrain or inhibit one's actions (McClelland, 1979, 1985). Activity inhibition is scored by counting the occurrence of the word "not" in the source and dividing this score by the total

number of words (e.g., Emmons & McAdams, 1991). In this study however, coders were encouraged to not solely rely on the use of “not”⁷⁵.

A copy of the final code book can found in the Appendix. As described previously, the coders worked through a series of on-line example ratings which they received feedback on. All of the narratives obtained at Time 1 were coded for the presence of avoidance. Following the procedures recommended Lombard and colleagues (Lombard et al., 2002, 2003), a random sample of 30 future work self narratives was first independently rated by both raters. Raters were blind to participants' demographics, subject area, and self-rated characteristics of the FWS like accessibility or importance. The interrater reliability on this random subsample of 30 narratives was unacceptably low ($\alpha = .35$). After discussing the coding instructions and disagreements on their interpretation with the raters, the instructions for identifying accounts of avoidance were refined. Ratings of the random sample of 30 future selves were omitted from the final data set. The two raters then independently rated a further random sample of 93 future self narratives using the modified coding instructions. The resulting interrater reliability was .94. The remaining 162 narratives obtained at Time 1 were then randomly distributed among the two raters and each coded by one rater.

Regarding the future work self narratives obtained from the longitudinal sample, 26 narratives obtained at Time 1 were coded as containing at least one account of avoidance. 29 of the narratives obtained at Time 2 were coded as containing avoidance. Interrater agreement was consistently high across both time points ($\alpha = .88$ at Time 1⁷⁶, $\alpha = .77$ at Time 2). However, in 11 cases the raters did not initially agree. These disagreements were resolved by discussion. Within these 55 narratives, the raters identified individual 71 incidents of avoidance. The majority of narratives ($N = 41$) contained only one incident of avoidance, and only two

⁷⁵ A prototypical case where *not* does not indicate a situation the individual wants to avoid is: “I am not a rich person but I am happy with what I have” (Participant 601).

⁷⁶ Because of the high interrater agreement in the pilot test, interrater agreement was estimated for a third of the total of narratives collected at Time 1. The remaining narratives were randomly distributed among the raters. Of the narratives analyzed as part of the present chapter, 31 were rated by only one rater.

narratives contained more than two incidents. I then proceeded to conduct an inductive content analysis of these incidents of avoidance.

7.6.4.2 Inductive content analysis of avoidance in FWS narratives

Table 7.1 shows the distribution of the 71 incidents of avoidance in the FWS narratives identified by the two independent raters over the list of themes I identified. Common topics were work-life balance concerns and concerns about feared personal characteristics, followed by avoiding teaching- or managerial responsibilities.

Table 7.1.
Themes of avoidance in FWS narratives

Themes	
1. Work-life conflict (long working hours, "live to work"/be a workaholic, high pressure, rumination about work/spill-over, spending long periods of time away from home, sacrificing family life)	26%
2. Personal characteristics (cynical, exhausted, dependent, perfectionist, afraid to take risks, narrow-minded, worried/anxious, stressed, pushy, ambitious, looking backwards, concerned with status)	13%
3. Teaching (marking, time requirements, topic not interesting)	12%
4. Responsibilities and administrative tasks associated with a management position	10%
5. Characteristics of the job (fragmented tasks, (non-)lab work, being tied to one specific organization, working in a particular department)	8%
6. Working in academia	7%
7. Financial insecurity	4%
8. Negative aspects of academic culture (competitiveness, need to justify oneself, narrow specialization, negative leadership)	4%
9. Low motivation at work (procrastination, resenting tasks)	3%
10. Subject of study (related to doctoral research)	2%
11. Ethical issues (stem cell research, defence, using people for one's own gain)	2%
12. Purely academic purpose (not having a real impact on people's lives; irrelevant work)	2%
13. Particular location (London, the United Kingdom)	2%
14. Job insecurity (temporary contracts, need to relocate)	1%
15. Narrow social network	1%
16. Past self	1%
17. Abandoning present self	1%

7.7 Results

Means and standard deviations of, and correlations among the study variables are shown in Table 7.2⁷⁷.

As predicted by Hypothesis 1a, the accessibility of the FWS was moderately positively related to contemporaneous positive affect at Time 1 ($r = .41, p < .01$), and Time 2 ($r = .41, p < .01$). The accessibility of the FWS at Time 1 was significantly related to positive affect at Time 2 ($r = .27, p < .05$), while the relationship between Time 1 positive affect and the accessibility of the FWS at Time 2 was not significant ($r = .13, n.s.$). Regarding negative affect, the cross-sectional relationship at Time 2 ($r = -.22, p < .05$), but not at Time 1 ($r = -.12, n.s.$) was significant. The longitudinal relationships between negative affect and the accessibility of the FWS were not significant ($r = -.13, n.s.$, for FWS obtained at Time 1, and $r = -.13, n.s.$, for FWS obtained at Time 2 respectively).

Zero-order correlations provided mixed support for Hypothesis 1b. Only uncertainty in FWS narratives obtained at Time 1 was significantly related to positive affect at Time 1 ($r = -.31, p < .01$) and at Time 2 ($r = -.27, p < .05$). Uncertainty in Time 2 narratives was not significantly related to positive affect at either Time 1 ($r = -.01, n.s.$) or Time 2 ($r = -.02, n.s.$). Correlations between uncertainty in FWS narratives and negative affect were moderate, but because of the small sample size only the cross-sectional relationship at Time 2 was significant ($r = .26, p < .05$), while the cross-sectional relationship at Time 1 was not significant ($r = .20, n.s.$). Longitudinal correlations between negative affect and uncertainty in the FWS narrative were not significant ($r = .25, n.s.$, for FWS obtained at Time 1, and $r = .13, n.s.$, for FWS obtained at Time 2, respectively).

⁷⁷ Note that the sample size varies between 55 and 90 due to missing data. As described in Chapter 5 and in the coding instructions in the Appendix, not all narratives allow for the rating of uncertainty. Ratings of uncertainty strongly depended on the use of conditional verb forms versus the use of present or future tense. Coders independently identified narratives in which no verbs were used, and these narratives were omitted from the ratings, resulting in the relatively low sample size with respect to uncertainty ratings.

Avoidance in FWS narratives at Time 2 was significantly related to positive affect at Time 2 ($r = -.26, p < .05$), but not at Time 1 ($r = -.17, n.s.$), and to negative affect at both time points ($r = .25, p < .05$, at Time 1, and $r = .28, p < .05$, at Time 2, respectively). However, avoidance in FWS narratives obtained at Time 1 was not significantly related to positive ($r = .07, n.s.$, at Time 1, and $r = .00, n.s.$, at Time 2) or negative affect ($r = -.02, n.s.$, at Time 1, and $r = .01, n.s.$, at Time 2). Thus, Hypothesis 1c was supported only for avoidance in Time 2 FWS narratives.

Contrary to my expectations, avoidance in FWS narratives was not significantly related to proactive skill development- or networking goals. The zero-order correlations did not provide support for Hypothesis 2.

Table 7.2.
Means, standard deviations, and correlations among study variables

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Age	29.11 (7.41)																
2. Gender	1.69 (.47)	-.03															
3. Year of study t1	2.4 (1.25)	.17	-.06														
4. Positive affect t1	3.26 (.61)	-.03	-.02	-.19													
5. Positive affect t2	3.16 (.63)	-.16	.16	-.29*	.49**												
6. Negative affect t1	2.12 (.64)	-.09	.04	.02	-.34**	-.12											
7. Negative affect t2	2.20 (.67)	.09	.15	.01	-.25*	-.31**	.48**										
8. Accessibility of FWS t1	3.61 (.98)	-.02	.12	-.14	.41**	.27*	-.12	-.13									
9. Accessibility of FWS t2	3.74 (1.06)	-.01	.14	-.05	.13	.40**	-.13	-.22*	.44**								
10. Uncertainty in FWS narrative t1	1.64 (.92)	-.01	-.15	.07	-.31**	-.27*	.20	.25	-.37**	-.12							
11. Uncertainty in FWS narrative t2	1.67 (.81)	-.06	.00	-.01	-.01	-.02	.19	.26*	.13	-.15	.34**						
12. Avoidance in FWS narrative t1	.33 (.47)	-.07	.09	.04	.07	.00	-.02	.01	.00	-.02	-.03	.19					
13. Avoidance in FWS narrative t2	.32 (.47)	.16	-.24	.20	-.26*	-.17	.25*	.28**	-.33**	-.05	.21	-.02	-.09				
14. Skill development goals t1	.50 (.50)	-.15	-.08	-.21	-.02	.03	.06	.03	-.08	-.01	-.07	.00	-.06	-.18			
15. Skill development goals t1	.44 (.50)	-.06	-.08	.07	.00	-.19	-.02	-.01	-.10	-.20	-.05	-.13	-.01	-.04	.32*		
16. Networking goals t1	.34 (.48)	-.14	.04	-.02	.24*	.06	-.25*	-.20	.24*	.15	-.11	-.07	-.05	-.10	-.03	.08	
17. Networking goals t2	.36 (.48)	.09	-.11	.05	.04	.17	-.17	-.26*	-.12	.04	.02	-.20	.04	.02	.11	.06	.17

*p <.05, **p <.01, ***p <.001; N = 55-90, depending on missing values

I then conducted conditional regression analyses (Plewis, 1985), entering the Time 1 control variables into the equation in the first step to predict the Time 2 outcomes before entering both the Time 1 variables and the predictor in the second equation. Results are shown in Tables 7.3, 7.4, and 7.5.

Hypothesis 1a proposed that the accessibility of the FWS in the memory would be positively related to positive affect, and negatively related to negative affect. While there was some support for this in the cross-sectional zero-order correlations as discussed above, the accessibility of the FWS did not play an additional amount of variance in either positive or negative affect once the Time 1 predictors had been controlled for ($\Delta R^2 = .00$, *n.s.*; see Table 7.3).

Table 7.3.
Regression analyses predicting affect at Time 2: Accessibility of the FWS

	Negative affect t2			Positive affect t2		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
	β					
Step 1:						
Age	.09	.15	.15	-.11	-.10	-.10
Gender	.15	.09	.10	.15	.21*	.20*
Year of study	-.00	-.02	-.03	-.23*	-.18	-.17
Step 2:						
Negative affect t1		.49***	.48***		--	--
Positive affect t1		--	--		.48***	.46***
Step 3:						
Accessibility of FWS t1			-.09			.06
Adjusted R ²	-.01	.22	.22	.08	.30	.29
ΔR^2 Step		.23***	.01		.22***	.00
F	.75	6.41***	5.26***	3.24*	9.21***	7.38***

*p <.05, **p <.01, ***p <.001

Hypothesis 1b proposed a negative effect of uncertainty in the FWS narrative on individuals' affect which was broadly supported by significant negative zero-order correlations between Time 1 FWS uncertainty and positive affect at both time points. In the conditional regression analysis, uncertainty did however not emerge as a significant predictor ($\beta = -.12$, *n.s.*); see Table 7.4).

Table 7.4.
Regression analyses predicting affect at Time 2: Uncertainty in the FWS narrative

	Negative affect t2			Positive affect t2		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
	β					
Step 1:						
Age	.22	.23*	.23*	-.21	-.21	-.21
Gender	.12	.08	.12	.12	.17	.14
Year of study	.06	.02	.01	-.29*	-.21	-.21
Step 2:						
Negative affect t1		.41**	.37**		--	--
Positive affect t1		--	--		.46***	.43***
Step 3:						
Uncertainty in FWS narrative t1			.19			-.12
Adjusted R ²	.03	.19	.21	.12	.32	.32
ΔR^2 Step		.17**	.03		.20***	.01
F	.156	4.63	4.36	3.85*	8.37***	6.94***

*p <.05, **p <.01, ***p <.001

There was no support for Hypothesis 1c. While avoidance in FWS narratives obtained at Time 2 was significantly related to negative affect as predicted, it did not predict a significant amount of variance in Time 2 positive or negative affect after controlling for the Time 1 predictors ($\beta = .06, n.s.$; see Table 7.5).

Table 7.5.
Regression analyses predicting affect at Time 2: Avoidance in the FWS narrative

	Negative affect t2			Positive affect t2		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
	β					
Step 1:						
Age	.15	.19	.19	-.18	-.16	-.17
Gender	.14	.09	.08	.08	.14	.16
Year of study	-.03	-.05	-.05	-.25	-.18	-.18
Step 2:						
Negative affect t1		.46***	.46***		--	--
Positive affect t1					.46	.49
Step 3:						
Avoidance in FWS narrative t1			.03			-.14
Adjusted R ²	-.00	.20	.19	.08	.28	.29
ΔR^2 Step		.21***	.00		.20***	.02
F	.94	5.19**	4.10**	2.95*	7.58***	6.47***

*p <.05, **p <.01, ***p <.001

Hypothesis 2 proposed that avoidance in FWS narratives would be negatively associated with skill development and networking as goals individuals were pursuing in order to make their desired future become reality. In order to test this hypothesis I conducted logistic conditional regression analyses. The results are shown in Table 7.6. Avoidance in FWS narratives was not significantly related to the mention of either skill development ($b = .01, n.s.$) or networking as a goal aimed at bringing about the FWS ($b = .42, n.s.$).

Table 7.6.
Regression analyses predicting skill development and networking goals at Time 2: Avoidance in the FWS narrative

	Skill development goals t2			Networking goals t2		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
	<i>b</i>					
Step 1:						
Age	-.03	-.01	-.01	.03	.04	.04
Gender	.02	-.01	-.01	-.68	-.74	-.82
Year of study	.23	.23	.23	.12	.10	.10
Step 2:						
Skill development goals t1		1.32*	1.32*		--	--
Networking goals t1		--	--		.95	1.01
Step 3:						
Avoidance in FWS narrative t1			.01			.42
Model Chi-square	1.28	5.80	5.80	5.23	4.73	2.30
-2 log likelihood chi-square	64.98	60.46	60.46	72.71	73.20	75.63

Note. Goals were coded as 0 = no mention of skill development/networking, 1 = skill development/networking in at least one goal. For the final model, the Nagelkerke $R^2 = .15$ for skill development, and .12 for networking. The percentage of correct predictions for the final model was 63.3% for skill development and 67.8% for networking. b = logistic regression coefficient. * $p < .05$, ** $p < .01$, *** $p < .001$

7.8 Discussion

Somewhat disappointingly, there was no support for the accessibility of the FWS, the uncertainty in the FWS narrative, or avoidance in the narrative in the prediction of positive or negative affect in the longitudinal sample. Below I discuss potential explanations for these findings as well as alternative post-hoc hypotheses.

7.8.1 Accessibility of the FWS

As reported above, there was no significant relationship between the accessibility of the FWS on individuals' positive or negative affect once the Time 1 predictors had been controlled for.

There was however a significant relationship between Time 2 accessibility and positive ($\beta = .29, p < .01$), but not negative affect ($\beta = -.12, n.s.$) once the Time 1 predictor had been controlled for.

Table 7.7.
Regression analyses predicting affect at Time 2: Accessibility of the FWS at Time 2

	Negative affect t2			Positive affect t2		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
	β					
Step 1:						
Age	.12	.18	.18	-.13	-.12	-.13
Gender	.13	.09	.11	.17	.17	.13
Year of study	-.07	-.06	-.06	-.18*	-.19	-.19
Step 2:						
Negative affect t1		.52***	.51***	--	--	--
Positive affect t1		--	--	.43***	.40***	.40***
Step 3:						
Accessibility of the FWS t2			-.12			.29**
Adjusted R ²	-.02	.25	.26	.11	.28	.36
ΔR^2 Step		.27***	.01		.18***	.08**
F	.65 <i>n.s.</i>	6.43***	5.37***	3.56*	7.30***	8.11***

* $p < .05$, ** $p < .01$, *** $p < .001$

Common method variance may potentially inflate the observed contemptuous relationship between positive affect and the accessibility of the FWS assessed at the same time point (c.f. Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). However, shared variance between the two constructs may be meaningful in itself. The activation of emotions primes the retrieval of mood-congruent memories and fantasies and influences free associations (e.g., Bower, 1981). Mood may influence

the retrieval of future selves, with positive affect making it easier to imagine a positive future for oneself.

Future research employing diary studies may explore the relationship between mood and the accessibility of future selves in more detail and over shorter periods of time.

7.8.2 Uncertainty in the FWS narrative

Uncertainty is inherently stressful and upsetting (Buhr & Dugas, 2002; Monat, Averill, & Lazarus, 1972; Van den Bos, 2001). For example, Buhr and Dugas (2002) found that individuals' intolerance of uncertainty predicts a significant amount of variance in worry after controlling for depression and anxiety. This idea was broadly supported by the cross-sectional zero-order correlations between affect measures and ratings of uncertainty in the FWS narratives. As described above, uncertainty in narratives obtained at Time 1 was negatively associated with contemptuous ($r = -.31, p < .01$) and consecutive positive affect ($r = -.27, p < .05$). The relationship with contemptuous ($r = .20, p < .10$) and consecutive negative affect ($r = .25, p < .10$) was approaching significance. Uncertainty in narratives obtained at Time 2 was not related to positive affect at either time point ($r = -.03, n.s.$, and $r = -.02, n.s.$, respectively), while the relationship with contemptuous ($r = .30, p < .05$), but not with previous negative affect ($r = .19, n.s.$) was significant. Significant cross-sectional relationships between FWS uncertainty and affect may again suggest an effect of mood on the retrieval (or generation) of FWS narratives.

Contrary to my predictions, uncertainty in the FWS narrative did not evolve as a significant predictor of participants' consecutive affect once previous affect had been controlled for. The sample size these hypothesis tests were based on was however relatively small ($N = 64$ for positive-, $N = 55$ for negative affect, respectively). Not all narratives could be rated in terms of their uncertainty as elaborated above, and power was thus low. Assuming a significance criterion of $p < .10$, the relationship between Time 1 uncertainty in the FWS and negative affect at Time 2 was significant after controlling for the Time 1 predictor ($\beta = .19, t = 1.65, p < .10$). There is thus some support for the idea that uncertain FWS are associated with higher levels of consecutive negative affect. The causal direction of this relationship however warrants further discussion. Uncertainty in FWS narratives is

likely to have a reciprocal relationship with negative affect; so far I have argued that uncertain FWS are less likely to instil feelings of hope and optimism. Being unsure about what one would like the future to be like and being uncertain about a desired future becoming reality may be associated with feelings of a lack of control and direction, and with anxiety.

On the other hand, individuals higher in negative affect are more likely to make more pessimistic projections for their future and be less confident about their ability to control future outcomes. In a study adopting shorter time frames, Nezlek and Pleko's (2001) findings suggest that daily events affect self-concept clarity via changes in mood and self-esteem. Self-concept clarity refers to the degree to which self-beliefs are internally consistent, stable, and clearly and confidently defined (J. D. Campbell et al., 1996). Similarly, negative events may affect individuals' self-esteem and mood and consequently the certainty of their FWS. There was however no support for this alternative hypothesis in the data. Uncertainty in the FWS narrative obtained at Time 2 was not significantly predicted by positive- ($\beta = .06, n.s.$) or negative affect ($\beta = .08, n.s.$) after the Time 1 predictor had been controlled for.

The somewhat inconsistent patterns of correlations between uncertainty and affect have to be seen in the light of the relatively low interrater-reliability in the uncertainty ratings of FWS narratives, and the small sample size. Future research adapting a shorter time frame may provide insights into the relationship between affect, and the uncertainty of FWS.

7.8.3 Avoidance in the FWS narrative

Previous research has mainly focused on avoidance goals at the mid-level of the goal hierarchy (Cropanzano et al., 1993), investigating avoidance in personal projects or strivings (e.g., Elliot & Sheldon, 1997; Elliot et al., 1997; Emmons, 1996; Emmons & McAdams, 1991; Roberson, 1990). Elliot and colleagues (Elliot et al., 1997) called for future research to explore the harmful effect of avoidance goals at higher levels of the goal hierarchy. In the present study, the dichotomous measure of avoidance in the FWS narratives based on the coder ratings was not significantly related to negative or positive affect, or to proactive career behaviours as expected. This may be because even though a FWS narrative may contain elements that the individual wishes to avoid, the FWS narrative as a whole still describes a future the

individual wishes to attain. Avoidance in FWS narratives may reflect current problems and difficulties. The individuals may envision a future where current difficulties have been overcome which may instill a sense of the present as malleable. An example of a FWS where this may be the case is shown below.

"My future work self spends a lot of time teaching, explaining complex issues to students. My future self works collaboratively with other researchers in other disciplines (such as Sociology, Politics, Psychology). My future self is not constantly reminded of the need to be competitive. My future self is allowed to lead his research on whichever topic he likes, while using whatever approach he likes. My future self is free and has the professional stability necessary to be genuinely creative."

Postgraduate research student in Philosophy

Elements in the FWS narrative the individual wants to avoid may merely be a sign of a more vivid FWS and may constitute an alternative dimension of richness of the FWS narrative. Avoidance in the FWS is positively associated with the length of the FWS narrative, but not with its elaboration. In future research, it may be fruitful to explore which characteristics of a FWS determine the extent to which it motivates lower-order avoidance goals.

Another reason for the lack of significant findings may be the coding of avoidance in the FWS narratives. Two independent raters identified the presence of at least one element the individual wanted to avoid in the FWS narrative. Past research that has linked avoidance in narratives to the setting of avoidance personal strivings has employed a measure of activity inhibition (e.g., Emmons & McAdams, 1991). Activity inhibition is the tendency to restrain or inhibit one's actions (McClelland, 1979, 1985), and is scored by counting the occurrence of the word "not" (including its contracted form⁷⁸) in the source and dividing this score by the total number of words. 32.2% of FWS narratives in the present study contained at least one "not" (or equivalent); 11.2% contained more one. Activity inhibition was weakly correlated with the coding of avoidance in the FWS narratives ($r = .15, p < .05$). It was significantly related to uncertainty ($r = .28, p < .001$) and specificity ($r =$

⁷⁸ Contracted forms of "not" that were counted in the FWS narratives in the present study were: don't, won't, isn't, aren't, weren't, wasn't, doesn't, needn't, didn't, hadn't, hasn't, haven't, can't, couldn't, mightn't, mustn't, needn't, wouldn't, shan't, shouldn't, and oughtn't.

-.18, $p < .01$) of the FWS narrative, to the accessibility ($r = -.14$, $p < .05$) and the importance ($r = -.23$, $p < .001$) of the FWS, and to career identity ($r = -.14$, $p < .05$), but the relationship with positive ($r = -.08$, *n.s.*) and negative affect ($r = .08$, *n.s.*) was not significant; neither was the relationship with self-rated proactive career behaviours ($r = -.05$, *n.s.*, for skill development; and $r = -.07$, *n.s.*, for network building) and proactive career behaviours in the goals ($r = -.11$, *n.s.*, for skill development; and $r = -.08$, *n.s.*, for network building). Activity inhibition may be reflective of tentative FWS. FWS high in activity inhibition were less certain and individuals were less committed to attaining them. Activity inhibition did however not provide a more fruitful measure of avoidance in FWS narratives than the coder ratings in the prediction of affect or proactive career behaviours.

Somewhat surprisingly, while Time 2 avoidance is related to individuals' affect, Time 1 avoidance is not. The correlation patterns seem to suggest that individuals' affect affects avoidance in FWS over time. Students experiencing high levels of distress at Time 1 may over the next 6 months have integrated elements of their current unsatisfying situation into their FWS as something to be avoided in the future. An alternative explanation for the relationship between state affect or mood and avoidance in FWS narratives would be the influence of dispositional affect. As individual trait, NA reflects individuals' tendency to experience negative emotional states (Tellegen, 1985; Watson & Clark, 1984). Individuals high in NA are generally more likely to experience negative affective states and tend to feel tense, anxious, distressed, nervous, worried, and upset. They are also more likely to have a negative view of themselves and of the world around them, and tend to interpret ambiguous stimuli negatively (e.g., Goodstein, 1954). Individuals high in dispositional PA on the other hand tend to see themselves in a more positive light, more frequently experience positive emotional states (Tellegen, 1985), and have a stronger sense of well-being (Taylor & Brown, 1988). Trait NA may make it more likely for individuals to both experience negative mood states and to set avoidance goals, i.e., develop FWS that contain more accounts of avoidance; this would inflate the relationship between state affect and avoidance in FWS narratives. The inconsistent relationship between avoidance and affect over the two time points however seems to point towards a lagged effect of mood on avoidance in FWS narratives, and seems to contradict the effect of dispositional affect as an alternative explanation. More

avoidant FWS may be developed as a response to negative experiences. Their formulation may however not necessarily be detrimental to individuals' well-being. Above, I have mentioned the possibility that avoidance in FWS may reflect individuals' envisioning of a future in which current unsatisfying circumstances and problems have been overcome. If this is the case, FWS containing avoidance may reflect attempts of cognitive coping rather than avoidance goals that are detrimental to individuals' well-being. Imagining a future in which current problems have been overcome may provide a sense of the situation, and the self, as malleable. In this case, avoidance in FWS narrative would still be positively associated with contemptuous negative affect as it arises from an individual's dissatisfaction with the present situation. It may however have a more distant effect on individuals' well-being through instilling a sense of hope. Future research employing diary studies and different time frames for data collection may explore the potential interaction between affect and avoidance in FWS in more detail.

Future research may also explore the role of goal progress in the link between avoidance in FWS and individuals' affect. Elliot and colleagues (1997) found the relationship between avoidance strivings and affect mediated by goal progress. Future research could address this question in relation to future work selves.

The inductive content analysis of incidents of avoidance in FWS narratives also suggests further research questions that warrant attention by future research. For example, the personal characteristics participants do not want to see in their future self are likely to be inspired by negative role models. The link between negative role models and feared future selves may provide a fruitful area for future research.

7.8.4 Limitations

Some of the limitations of the current study have already been discussed above. The methodological limitations discussed in 6.5.4 also apply here. Low power due to the relatively small size of the longitudinal sample means that small effect sizes may not have been detected. The longitudinal sample may also not have been representative of the overall postgraduate research student population. The relatively low interrater reliability of the uncertainty ratings of the FWS narratives is a further limitation.

7.8.5 Implications for future research

The present study suggests directions for future research on the link between individuals' affect, and the three aspects of the FWS I focused on in this chapter.

The significant contemptuous relationship between the accessibility of the FWS and positive affect (controlling for previous positive affect) seems to suggest that mood affects the retrieval of FWS, or alternatively that an accessible FWS increases positive affect. The causality of this relationship warrants further investigation as past research has suggested beneficial effects of the visualization of hoped for future selves (Sheldon & Lyubomirsky, 2006).

The near-significant relationship between the uncertainty expressed in the FWS narrative and negative affect (controlling for previous negative affect) seems to suggest that uncertainty about the desired future and about it becoming reality has a negative effect on individuals' well-being. Research on identity status in adolescents supports the idea that commitment to a (current) identity is associated with higher levels of well-being. Exploring identity alternatives, or avoiding to explore them, is associated with lower well-being (see Meuus, 1996; and Meuus, Iedema, Helsen, & Vollebergh, 1999, for reviews). Future selves on the other hand may in fact provide a mechanism of identity exploration (Dunkel, 2000). Future research may explore how the development of and commitment to a FWS evolve over time and influence individuals' well-being.

Finally, the correlation patterns between NA and PA and avoidance in FWS narratives at Time 2 warrant further exploration. Negative daily events may affect individuals' mood and lead to the integration of elements to be avoided into the FWS. Future research may also explore which characteristics of FWS lead to the formulation of avoidance- rather than approach sub-goals.

8 Chapter 8 – General discussion and conclusion

8.1 Introduction

The shift towards a more agent-based view on behaviour in organizations has inspired a wealth of research into individuals' proactive attempts to shape their work environments, their tasks, their career and their organization. Individuals look ahead to prevent problems in the production process (Parker et al., 2006), they try to get the top management's attention for issues they consider important (Dutton & Ashford, 1993), they seek feedback to improve their performance (Ashford, 1986), they seek out information to more effectively adapt to new organizational environments (V. D. Miller & Jablin, 1991; Morrison, 1993b), and make innovative suggestions for change (Van Dyne & LePine, 1998). These behaviours are guided by goals that are not prescribed, but are self-set and pursued relatively independent of external contingencies (Parker et al., forthcoming). Previous research has focused on the individual variables and contextual factors that motivate proactive behaviour, and has begun to explore interactions between person and situation (e.g., Grant & Sumanth, in press; Kim & Wang, 2008; LePine & Van Dyne, 1998; Rank et al., in press; Speier & Frese, 1997).

In this thesis I have looked beyond the more proximal processes of expectancy- and valence judgements that underlie the generation and pursuit of proactive goals (Parker et al., forthcoming). I have focused on the under-investigated role of anticipation and mental simulation in the proactive behaviour process (Grant & Ashford, 2008), and have explored the role of the self-concept in the motivation of proactive behaviour. I have proposed that proactive goals are at least partially derived from higher-order goals that involve the self. Drawing on the extensive literature on possible selves I have introduced the more specific concept of the future work self (FWS) – a hoped for, ideal image of the self in the future in relation to work that is discrepant from the present self. In my theoretical work I have argued that FWS on different levels of the self-concept can be mapped onto proactive behaviours aiming to benefit different targets.

In the empirical part of this thesis I have focused exclusively on personal FWS, that is, FWS on the personal level of the self-concept. At this level, self-worth

is derived from one's sense of uniqueness and distinction (Brewer & Gardner, 1996). Personal FWS reflect individuals' life-goals and values. They act as a source of proactive goals that are consistent with one's convictions and identity. As I will elaborate later, they may also reflect overcoming present unsatisfying situations and can thus instil a sense of hope and optimism. In sum, I have argued that FWS provide a potential mechanism through which individuals actively shape their future work life and derive a sense of meaning and continuity.

In this section, I will integrate the findings of the four empirical chapters and draw a general conclusion on the contribution of the concept of FWS for our understanding of proactive behaviour. I will outline the theoretical implications of this work and lay out directions for future research, before discussing the limitations of this thesis, and the practical implications of its findings.

8.2 Summary and Integrated discussion of findings

8.2.1 Overview over the four empirical chapters

The overall aim of this thesis was to link the concept of FWS to proactive behaviour. I have focused in particular on personal FWS rather than relational or collective FWS. Personal FWS are based on the personal identity of an individual and reflect motives of self-enhancement, achievement and distinction. Personal FWS "reflect progress in terms of personal characteristics; becoming more skilled, wealthier, healthier, or better educated can be a powerful image that sustains and justifies current activities" (Lord et al., 1999, p. 179). However, because FWS reflect individuals' values, imagined achievements are not necessarily restricted to monetary wealth or social status.

In this thesis I have investigated the relationship between personal FWS and proactive person-environment fit behaviour, i.e., proactive behaviours aimed at changing either oneself or the environment to achieve a better fit between the individual and the environment (Parker & Collins, 2009).

As discussed above (see 2.2 and 6.2), FWS are reference points in self-regulatory systems (Carver & Scheier, 1981, 1990b, 1998). Importantly, they create discrepancies that generate proactive goals. Because of their focus on the future, these discrepancies between the present and a desired future are however not

threatening to individuals' self-worth (see 2.2.2). Following Parker and Collins (2009), I have drawn on person-environment fit research (e.g., Edwards, 1996). I have broadly focused on two different pathways of discrepancy production and – reduction in the relationship between FWS and P-E fit proactivity.

On one hand, FWS provide the opportunity to identify anticipated future demands (D-A fit). Comparing one's present skills and abilities with anticipated future demands can motivate P-E fit proactivity aimed at changing the self such as proactive skill management, the acquisition of skills and knowledge required in the future, and feedback seeking aimed at improving one's skills and performance.

On the other hand, FWS reflect both present and anticipated future values and interests and can motivate P-E fit proactivity by making discrepancies between these values and one's current environment salient (S-V fit). The awareness of this discrepancy can motivate proactive behaviour aimed at shaping one's future environment such as the negotiation of one's job role and responsibilities, career-related networking, and career planning.

Throughout this thesis I have addressed both proactive behaviours aimed at changing one's self and one's skills, abilities, and performance; and proactive behaviours aimed at shaping one's future. These two different categories of proactive behaviour reflect different approaches to achieving future P-E fit (see Chapter 7 for a more detailed discussion).

I have taken two different approaches to exploring the link between FWS and P-E fit proactivity. I have focused on postgraduate research students' self-ratings of their proactive behaviours in a cross-sectional (Chapter 4) and a longitudinal study (Chapter 6). I have also content-analysed the goals postgraduate research students were currently pursuing in order to bring about their FWS. Two independent raters reliably coded these goals for the presence of the proactive career behaviours of networking and skill development. I again explored both the cross-sectional (Chapter 5) and the longitudinal (Chapter 7) relationship between FWS and these proactive goals. Table 8.1 gives an overview over the design of the four studies, and the proactive behaviours they focus on.

Table 8.1
Overview over methods and proactive behaviours over the four studies

		Chapter 4	Chapter 5	Chapter 6	Chapter 7
Method	Cross-sectional design	x	x		
	Longitudinal design			x	x
	Self-ratings of proactive behaviours	x		x	
	Proactive goals		x		x
Shaping the future	Job role negotiation			x	
	Career planning	x		x	
	Career consultation	x		x	
	Net-working	x	x	x	x
Shaping the self	Skill development	x	x	x	x
	Feedback seeking	x		x	

8.2.2 FWS: An integration of findings

With regard to FWS, I focused on three different aspects throughout this thesis: Their self-rated characteristics, the characteristics of the FWS narrative, and aspects of the content of the FWS narrative.

As described in Chapter 3, I have collected narrative descriptions of postgraduate research students' FWS. A further example of a FWS is shown below.

"I imagine myself as a senior environmental consultant for a small company. I will be writing environmental statements, speaking at public enquiries, choosing and training new members of staff and still being allowed out to do lots of field work in the beautiful countryside. I will be a particular expert in amphibians and reptiles. My future work self will be highly competent, experienced and dedicated, and I will always be enthusiastic about my job."

Postgraduate research student, Biological Sciences

I focused on accessibility, importance, and exclusivity as self-rated characteristics of the FWS that are likely to reflect its centrality in the self-concept, and thus its influence on behaviour and affect. In addition, three different characteristics of the FWS narrative were rated by two independent coders. The elaboration, specificity and uncertainty of FWS narratives were proposed to determine their function as a basis for mental simulation and thus their usefulness in generating the discrepancies from which proactive goals are derived. Finally, in

Chapter 7 I have additionally focused on the extent to which FWS contain elements individuals want to avoid as an aspect of the actual content of FWS narratives.

Below, I integrate cross-sectional and longitudinal findings regarding these three different aspects of FWS, and identify synergies and directions for future research as well as theoretical implications.

8.2.3 Accessibility and elaboration: Effects of a clear image

Accessibility. The centrality of identities in an individual's self-concept determines their influence on behaviour (Stryker & Serpe, 1994). Core identities (Gergen, 1965), that are more frequently activated, have a stronger influence on behaviour. Like other mental constructs, FWS can become chronically accessible if we frequently think of them and use them (Bargh, 1982; Higgins et al., 1982; Srull & Wyer, 1986). FWS organize and energize individuals' behaviour aimed at bringing them about only when they are activated in the working self-concept (Leonardi et al., 1998; Markus & Wurf, 1987).

Having a clear and accessible image of one's FWS consistently emerged as a significant predictor of proactive behaviours throughout this thesis. The accessibility of the FWS had significant cross-sectional relationships with self-rated proactive skill development (Chapter 5), over and above the effect of career identity and future orientation. These findings could however not be replicated in a structural model, which also included a common method factor (see Figure 5). Accessibility of the FWS was indirectly related to negative feedback seeking via an ego protection motive (Chapter 4), suggesting that an accessible FWS shelters individuals from the potentially hurtful effects of critical feedback on their ego.

An accessible FWS at Time 1 significantly predicted postgraduate research students' job role negotiation at Time 2, even controlling for their Time 1 job role negotiation (Chapter 6). This finding suggests that having a clear image of themselves in the future they can easily retrieve may motivate individuals to negotiate their current roles and responsibilities.

The accessibility of the FWS at Time 1 was also significantly related to proactive career behaviour 6 months later at Time 2 (Chapter 6). This relationship however became non-significant once the Time 1 predictor had been taken into account.

Overall, these findings suggest that the accessibility of the FWS plays an important role in the motivation of proactive behaviours aimed at achieving fit between the self and the future environment. The indirect effect of the accessibility of the FWS on negative feedback seeking via an ego protection motive suggests that a clear image of the self in the future at least partially plays a role by changing individuals' perception of their present situation. The location of this ideal self in the future affords individuals with a "cushion of resources" (Pennington & Roese, 2003, p. 253), and may generate a sense of the self as malleable (c.f., Dweck, 1986, 1999). In addition, an accessible FWS may also provide a sense of direction. This idea seems to be supported by the positive relationship between the accessibility of the FWS, and proactive skill development and job role negotiation. Having a clear image of the self in the future may help identify future skill requirements, and motivate individuals to actively shape their present role.

In addition to strengthening the link between a future self and behaviour, the accessibility of future selves can also influence individuals' well-being. King and colleagues find accessible future selves positively related to consecutive subjective well-being (L. A. King & Raspin, 2004; L. A. King & Smith, 2004). I found a significant relationship between Time 2 accessibility and positive, but not negative affect once Time 1 mood had been controlled for. Mood may influence the retrieval of hoped for FWS; positive affect may make it easier to imagine a positive future for oneself, as the activation of emotions primes the retrieval of mood-congruent memories and fantasies (e.g., Bower, 1981). Alternatively, the effect of an accessible FWS on mood may not predict changes in mood over a period of 6 months but may be more immediate. Future research with shorter time frames may explore the effects of the accessibility of a hoped for future self on mood in more detail.

Elaboration. The elaboration of a future self refers to the detail and vividness of its narrative. Elaboration goes beyond the extent of detail in the FWS narrative, but also reflects the breadth of aspects of the future that are considered. As I have argued above, frequent activation of a future self in the working memory may afford individuals more time to spend on the construction and elaboration of a future self story. King and colleagues (e.g., L. A. King & Raspin, 2004) similarly consider the accessibility of future selves and the elaboration of future self narratives as distinct, but related. Indeed, I found accessibility and elaboration significantly related ($r =$

.16, $p < .05$). This relationship was stronger for participants who took part at both time points ($r = .25$, $p < .05$).

I argued that more elaborate FWS would provide a more effective basis for mental simulation and enable individuals to identify potential future skill gaps and resource requirements. More elaborate FWS narratives were indeed more frequently associated with skill development and networking as goals for bringing them about, providing some initial support for the link between FWS and the setting and pursuit of proactive goals.

Contrary to my expectations, elaboration of FWS narratives was negatively related to consecutive self-rated proactive skill development (see Chapter 6, Table 6.10), once skill development at Time 1 had been controlled for. The contemptuous relationship between FWS elaboration and proactive skill development was however not significant at either Time 1 ($r = .09$, *n.s.*) or Time 2 ($r = .04$, *n.s.*). As I have described in 6.5.1, more elaborate FWS reflect broader, richer images of the future. These broader, richer images of the desired FWS seem to lead to a decrease in proactive skill development over time. This finding seems to contradict the finding that more elaborate FWS narratives were more frequently associated with skill development as a goal aimed at bringing them about. This apparent contradiction may result from differences between skill development as a goal aimed at bringing about the FWS, and self-rated proactive skill development. In fact, proactive skill development self-ratings were not significantly related to the mention of skill development goals ($r = .04$, *n.s.*). This may be because proactive skill development self-ratings (see 4.3.2.2) explicitly focus on skills that will be needed in the future rather than in the current position, while skills individuals develop to bring about their future self may be needed in individuals' current roles as well. Doing well in their current role may be an important part of individuals' progression towards their future self, and it may be rare that the skills individuals anticipate they will need in the future are not also required in their current position. Individuals with less elaborate FWS on the other hand seem to engage in more proactive skill development over time.

An example of a FWS narrative high in elaboration is shown below.

I can see myself working in a research center doing investigation related to materials science. I am supervising several postgraduate students [...], but I am actually a really cool person to work with. My students get time, attention, advice and freedom to think and do. My research is going quite well, I have been publishing interesting results in a regular basis and presenting my work in international conferences that makes me travel a lot [...]. I keep contact with research groups in different countries and develop good projects together. I am trying to build a prestigious career to keep a good image of scientists of my country. I have a fulfilling and well balanced life. I am happy! [...]

In contrast, the example below shows a FWS narrative low in elaboration.

I am looking forward to carry out my job when I have graduated from the University of [...] as a Environmental Hydrogeologist. And also I want to be the top position of my Department (Director General).

Less elaborate FWS may be more narrowly focused on career aspects and thus lead to an increase in proactive career behaviour. An alternative explanation for this finding that contradicts my initial expectations is that individuals with less elaborate FWS may be envisioning career paths outside academia. These careers are more likely to require the development of skills that are not necessarily needed during the course of the PhD. At the same time, individuals imagining their future selves not in academia but in industry may have a less vivid image of what their future career would entail. PhD supervisors, colleagues and other academics are likely to provide role models only for those who wish to pursue a career in research. Postgraduate research students aiming to pursue a career in industry or in public service may have less information on which to base the creation of their FWS, and thus their FWS narrative. Indeed, the perceived importance of pursuing a career in academia⁷⁹ was positively associated with the elaboration of the FWS narrative (Time 1: $r = .27$, $p < .05$; Time 2: $r = .36$, $p < .01$), providing some initial support for

⁷⁹ The perceived importance of pursuing a career in academia was assessed with a single item ("In the future, how important is it to you to have a successful career in academia?") rated on a 5-point Likert-type scale from 1 "not at all important" to 5 "very important".

this idea. This findings further point towards the importance of mentors and leaders in the development of FWS. Practical implications will be discussed below.

In addition, more elaborate FWS narratives were associated with higher supervisor-ratings of postgraduate research students' performance in a small sub-sample of the main study. A more elaborate FWS may thus also enhance performance in one's present job. Having a vivid and detailed image of their future self may motivate individuals to exert more effort in their present role, in particular if this role is seen as instrumental for the desired future. Alternatively, postgraduate research students who are performing well may form more elaborate (and possibly more ambitious) images of what their professional future could be.

In summary, the accessibility of FWS and their elaboration emerge as significant predictors of proactive behaviour, reflecting the importance of a clear image of the future self. This has practical implications for organizations aiming to enhance individuals' proactive self-development and attempts to shape their jobs and their future, as I will discuss below.

8.2.4 Uncertainty and exclusivity: Reflections of self-complexity and future-oriented identity status

Exclusivity. Exclusivity refers to the centrality of a specific future work self in relation to alternative future work selves. The self-concept is a collection of (potentially competing) identities (Markus & Wurf, 1987). A FWS can either be one of a collection of similarly central FWS the individual holds, or it can be the only FWS at the core of an individual's self-conception – an exclusive FWS. A more exclusive FWS will be activated more frequently in an individual's working memory than one that is competing with a broad array of alternative FWS, and will thus have a stronger influence on behaviour. I proposed that exclusivity reflects an aspect of the centrality of a FWS in the self-concept. I expected that exclusive FWS would also be more accessible in the memory, and that individuals would be more committed to them. Indeed, the exclusivity of a FWS was significantly related to its perceived importance for the individual ($r = .29, p < .001$). The relationship with the accessibility of the FWS was however not significant ($r = .03, n.s.$). Individuals are thus more committed to a more exclusive FWS; more exclusive FWS are however not necessarily easier to imagine.

Contrary to expectations, individuals with an exclusive FWS reported lower levels of proactive career behaviour, such as less planning of their career and less attention to building networks and skills (Claes & Ruiz-Quintanilla, 1998). A negative effect of an exclusive FWS on proactive career behaviours could occur if the individual feels that the future they imagine for themselves will become reality regardless of their own behaviour. If an individual is certain that this one future they imagine for their career will become reality, they may feel that they do not need to do anything to bring this future about. Exclusive FWS were however not associated with lower uncertainty in the FWS narrative ($r = -.01$, *n.s.*, see Table 5.6). Alternatively, individuals who are not yet set on one exclusive FWS may still be developing their FWS and therefore be more interested in gathering information on potential career opportunities, and in seeking realistic feedback on their potential. This finding was however not replicated in the longitudinal sample of postgraduate research students who participated at both Time 1 and 6 months later at Time 2. The exclusivity of the FWS was not significantly related to consecutive proactive career behaviour once the Time 1 predictor had been controlled for (see Table 6.4).

Contrary to my expectations, the exclusivity of a FWS also had a negative relationship with the instrumental feedback seeking motive, while it was positively predicting positive feedback seeking and an ego protection motive (Chapter 4). Although further research is needed to establish causality, this finding suggests that having only one FWS and not being able to imagine other possible futures for oneself makes individuals' ego more vulnerable and thus motivates them to seek positive feedback on their performance and to avoid critical feedback. In order to establish causality, I explored this relationship in the longitudinal sample. The exclusivity of the FWS was significantly related to the consecutive ego protection motive ($\beta = .21$, $p < .05$) after controlling for the Time 1 predictor as well as age, gender, the year of study, and the accessibility and importance of the FWS at Time 1. This finding thus further supports the idea that more exclusive FWS make individuals' ego more vulnerable to the effects of negative feedback. This idea is consistent with self-complexity theory (Linville, 1985, 1987). High self-complexity refers to a high number of different self-aspects in the self-concept and a high degree of semantic difference among them. In a self-concept high in self-complexity, self-evaluations of one self-aspect spread less to the total of the self-concept. Individuals

higher in future-oriented self-complexity thus show weaker affective reactions to feedback regarding future-oriented goals (Niedenthal et al., 1992). The exclusivity of the FWS is likely to reflect future-oriented self-complexity. Individuals with a less exclusive FWS who can imagine multiple futures for themselves are likely to react less strongly to negative feedback regarding their progress towards this specific FWS. This seems to point towards a beneficial effect of less exclusive FWS.

Uncertainty. Uncertainty reflects the degree of doubt and insecurity about the FWS. Uncertain FWS are less accessible ($r = -.38, p < .001$, see Table 5.6), and are perceived as less important ($r = -.22, p < .01$). While I expected a more exclusive FWS to be more certain, exclusivity was not significantly related to uncertainty in the FWS narrative as mentioned above ($r = -.01, n.s.$, see Table 5.6).

Above I have argued that uncertainty is inherently stressful and upsetting (Buhr & Dugas, 2002; Monat et al., 1972; Van den Bos, 2001). A negative effect of uncertainty was broadly supported by the cross-sectional zero-order correlations between affect measures and ratings of uncertainty in the FWS narrative; there was thus some support for the idea that uncertain FWS are associated with higher levels of negative affect. The causal direction of this relationship however warrants further discussion. Uncertainty in FWS narratives is likely to have a reciprocal relationship with negative affect. While uncertainty about one's future-oriented identity may be associated with feelings of a lack of control and direction, and thus with anxiety, the reverse relationship between uncertainty and affect also seems plausible. Individuals higher in negative affect are more likely to make more pessimistic projections for their future and be less confident about their ability to control future outcomes.

Uncertainty of FWS as expressed in the narrative was negatively associated with proactive behaviours. It was negatively related to consecutive proactive skill development and career planning⁸⁰ (see Table 6.10), and to consecutive job role negotiation⁸¹ (see Table 6.9). These findings suggest that individuals who do not know what their future self would ideally do and be like are less likely to develop their skills in anticipation of future demands, and to shape their current and future

⁸⁰ Uncertainty in the FWS narrative did however not explain a significant amount of variance in consecutive career planning once the Time 1 predictor had been taking into account.

⁸¹ However, uncertainty did not explain a significant amount of variance in Time 2 job role negotiation once the Time 1 job role negotiation had been taking into account.

environment through negotiations with their supervisor. Uncertain FWS seem to fail to provide an effective basis for mental simulation and the identification of future resource- or skill requirements. Uncertain future-oriented identities may not provide a signpost for individuals to stir towards, and confronting these uncertain identities is likely to be associated with feelings of insecurity, lack of control, and anxiety.

The uncertainty and exclusivity of a FWS may be reflective of an individual's stage in the process of the formation of their future-oriented identity. Similar to the adolescent identity crisis, transitions in one's work life may require the formation of an adjusted future-oriented identity. The developmental psychology literature on the identity formation process primarily focuses on processes of identity exploration and formation in adolescents and assumes that identity is eventually achieved. However, even once individuals have committed to an identity (see below), they still engage in self-exploration and the evaluation of self-relevant information. Identity formation is a life-long task (Grotevant, 1987), and identity exploration is the "work" of identity (Grotevant, 1987, p. 204). This conceptualisation of identity as subject to ongoing revision and exploration forms the basis of identity literature in organizational studies where some authors conceptualise identity formation as a more or less continuous process (e.g., Carroll & Levy, 2008; Simpson & Carroll, 2008).

Table 8.2 summarises different modes of addressing the task of identity formation and associated orientations towards identity-relevant information.

Table 8.2
Identity statuses, identity processing orientations, and associated outcomes

Identity status (Marcia, 1966)	Identity processing orientation (Berzonsky, 1988, 1989)	Well-being outcomes (reviewed by Berzonsky, 1990; 2003)
Identity achievement	Information orientation	Positive
Identity foreclosure	Normative orientation	Both positive and negative
Identity moratorium	Information orientation	Positive
Identity diffusion	Avoidant orientation	Negative

In his model of the development of identity, Marcia (1966) proposes four identity statuses. Identity achievement follows a period of exploration and crisis after which individuals commit to an identity. Identity foreclosures are committed to an identity without having first explored identity alternatives. Identity moratorium refers to the phase of identity exploration. Individuals in the stage of identity diffusion finally have not explored identity alternatives.

Different identity statuses are associated with different social-cognitive strategies individuals use when facing identity issues (Berzonsky, 1992a), so called identity processing orientations (Berzonsky, 1988, 1989). Individuals who are in the phases of identity achievement or identity moratorium are self-exploring and employ an information orientation, actively seeking out, elaborating, and evaluating self-relevant information. Self-discrepant feedback will cause these individuals to revise and adjust their self-definitions (Berzonsky, 1990). This identity processing orientation should thus result in complex and differentiated identities (Berzonsky, 1992a), and is associated with successful coping with stress and anxiety, problem-focused coping, and greater openness to experience (see Berzonsky, 1990; 2003, for reviews). Individuals in the stage of identity foreclosure are proposed to employ a normative orientation and conform to the expectations and prescriptions of reference groups and significant others. They are motivated to conserve and protect their existing self-definitions. Finally, individuals in the identity diffusion status employ an avoidant orientation, and avoid and procrastinate on dealing with identity questions. An avoidant orientation is negatively related to self-esteem and academic achievement (see Berzonsky, 1990; 2003, for reviews).

This categorisation of identity statuses refers to the identities individuals currently hold. The FWS relates to these ideas in two ways. Firstly, future selves are a mechanism of identity exploration (Dunkel, 2000; Dunkel & Anthis, 2001). In line with this idea, future selves have been shown (or suggested) to play an important role in the exploration and formation of individuals' professional identity (Ibarra, 1999), and career identity (Fugate et al., 2004).

Second, future-oriented identities are likely to not only provide a mechanism of identity exploration. Similarly to present identities, future-oriented self-definitions in themselves have to be explored and achieved. This process is likely to parallel the exploration and formation of the current identity. The certainty and exclusivity of FWS is likely to reflect the certainty and exclusivity of individuals' identity over all. Exclusive FWS may reflect foreclosed future-oriented identities. Such identities may be positively associated with effective behaviours (Berzonsky, 1992a), but negatively with problem-focused coping and openness to identity-relevant information (Berzonsky, 1990). Consistent with this idea, exclusive FWS were positively associated with an ego protection motive, and negatively with an instrumental

feedback seeking motive. Individuals with exclusive FWS seem motivated to avoid potentially identity-relevant information. In the absence of alternative FWS, this strategy protects their sense of identity and allows them to maintain a positive self-evaluation. Paralleling more general processes of identity exploration and formation, complex FWS that result from an extensive exploration of future-oriented identity alternatives (c.f. identity achievement and identity moratorium) are likely to be associated with greater openness to identity-relevant information.

Uncertainty in FWS may reflect either ongoing exploration, or in fact identity diffusion and avoidance. An example of a FWS that seems to reflect ongoing exploration is shown below.

I see myself doing a job that I enjoy - not sure yet what this will be. I want to be able to [] do s[om]e[thing] about my values and beliefs in my worklife, e[.].g. helping people, fighting for environmental protection etc. I also see myself in a job with flexible working hours, so that I have a chance to spend a lot of time with my family.

Uncertain FWS may also be the result of an identity crisis. Two examples of FWS which seem to support this idea are shown below. In both examples, participants mention having lost a formerly clear idea of what their future would be like and being confused and unsure. They also refer to postponing the exploration of their future self to a later point in time, which is consistent with the idea of an avoidant orientation in the stage of identity diffusion.

I have really no idea at that point anymore. Neither do I know what I want nor what I could achieve. Maybe it becomes clearer again after some time doing the PhD. Right now I feel rather confused.

Until recently I had always imagined myself in a research position, possibly as a lecturer in a university somewhere in the world. Recently, with deadlines looming, no end to the prob[le]ms in our labs and 1000s of samples still to analyse I am unsure what will happen next week so feel unable to co[n]template the future (sorry).

I further explored this idea by investigating the relationship between uncertainty in the FWS narrative, and individuals' ego protection motive. The relationship between uncertainty in the FWS narrative at Time 1 and a consecutive ego protection motive was near significant after controlling for the Time 1 predictor

as well as age, gender, and the year of study ($\beta = .22, p = .06$). This finding provides some initial support for a link between the uncertainty of FWS, and individuals' motivation to avoid self-relevant information because it threatens their self-evaluation.

8.2.5 Importance and specificity: Committing to a concrete path

Importance. Importance refers to the commitment to a FWS. Commitment to an identity leads to more striving towards its attainment (Wicklund & Gollwitzer, 1982). Individuals who are committed to a specific identity want to make it an enduring part of who they are.

The importance of FWS did not evolve consistently as a significant predictor of proactive behaviour in this thesis. Importance of the FWS was however significantly related to an instrumental feedback seeking motive in a cross-sectional, structural model (see Figure 5), suggesting that commitment to a FWS may be associated with individuals' ability to see the value of developmental feedback for achieving their goals.

As described in 2.1.5.2, some previous research has treated the importance of a future self as an outcome variable that is influenced by other characteristics such as the availability of the future self in the working memory (Norman & Aron, 2003). However, this research was correlational in nature. In the present data I find no relationship between any characteristics of the FWS and consecutive importance over a period of 6 months, once Time 1 importance has been taken into account. Drawing on research on identity statuses as described above, the importance of a FWS may reflect an individual's commitment to a FWS, and thus an identity achievement or identity foreclosure status. It is possible that important FWS the individual is highly committed to result from an extensive process of exploration which would also result in a more elaborate, accessible FWS (identity achievement). Consistent with this idea, the importance of the FWS was significantly related to the elaboration ($r = .13, p < .05$) and the accessibility of the FWS ($r = .45, p < .001$; see Table 5.6) in the cross-sectional data.

Individuals may however also prematurely commit to a specific FWS by conforming to prescriptions and expectations of reference groups and significant others (identity foreclosure) (Berzonsky, 1988, 1989). Foreclosed FWS may be

associated with equally high levels of proactive career management as achieved FWS; they may however be more rigid and brittle, and more vulnerable, and may motivate individuals to avoid potential threatening information such as negative feedback. Similar processes were discussed above for exclusive FWS. While the exclusivity and the importance of a FWS were positively associated ($r = .29$, $p < .001$, see Table 4.2), it is possible that an individual is highly committed to a FWS, yet can also imagine other future paths for themselves. Commitment to a FWS and its perceived exclusivity are distinct characteristics of FWS (see Table 4.4 for a confirmatory factor analysis).

Specificity. More specific FWS narratives reflect a concrete professional future rather than vague images that would be compatible with different career paths. Consistent with goal setting theory, I proposed that more specific FWS would provide more effective higher-order goals for individuals to pursue and thus be associated with higher levels of proactive behaviour. Specificity of the FWS as reflected in the narrative was however not consistently related to proactivity. More specific FWS narratives were associated with skill development as a goal for bringing them about ($r = .19$, $p < .01$), but this finding was not replicated in a logistic regression analysis (see Chapter 5). Specificity of the FWS was positively associated with career identity ($r = .22$, $p < .05$). At both time points, more specific FWS narratives were also more elaborate (Time 1: $r = .39$, $p < .001$, and Time 2: $r = .60$, $p < .001$, respectively; see Table 6.3), but not more accessible (Time 1: $r = -.03$, *n.s.*, and Time 2: $r = .16$, *n.s.*, respectively) or important (Time 1: $r = -.04$, *n.s.*, and Time 2: $r = .07$, *n.s.*, respectively). Similar to elaboration, the specificity of FWS may also be influenced by individuals' knowledge about the respective career field. Individuals who were aiming to pursue a career in academia (see above) were able to provide more specific FWS narratives (Time 1: $r = .33$, $p < .01$; Time 2: $r = .29$, $p < .01$). This finding again seems to point towards the importance of mentors and role models in providing career-relevant information. The practical relevance of this finding will be discussed below.

8.2.6 Avoidance: Uncovering traces of feared future selves

Previous research has explicitly contrasted hoped for with feared future selves when instructing participants to provide future self narratives (L. A. King et al., 1998) or lists of future selves (Cross & Markus, 1991; Markus & Nurius, 1986; Oyserman & Markus, 1990). In the present research, I have focused on hoped for FWS, but have explored accounts of avoidance in FWS narratives. Drawing on research on the detrimental effects of avoidance goals on motivation (Carver & Scheier, 1981, 1990b; Elliot et al., 1997) and subjective well-being (Carver & Scheier, 1999; Elliot et al., 1997), I have proposed that FWS which were reflective of a future the individual wished to avoid would be associated with lower levels of proactive behaviour, and with higher negative affect. However, in the present research the negative effect of avoidance mid-level goals such as personal projects or strivings on individuals' well-being (e.g., Elliot & Sheldon, 1997; Elliot et al., 1997; Emmons, 1996; Emmons & McAdams, 1991; Roberson, 1990) was not replicated for the higher-level goal of the FWS; and avoidance in the FWS narratives was not significantly related to proactive behaviours as expected (see Chapter 7).

There were inconsistent relationships between individuals' affect and avoidance in the FWS narratives at the two time points, with avoidance and affect only being significantly associated at Time 2, but not at Time 1. Avoidance in FWS narratives collected at Time 2 was negatively associated with positive affect (Time 1: $r = -.26$, $p < .05$; Time 2, $r = -.17$, *n.s.*), and positively associated with negative affect (Time 1: $r = .25$, $p < .05$; Time 2, $r = .28$, $p < .01$). This potentially points towards a lagged effect of affect on avoidance in FWS narratives. Experiencing negative events at Time 1 may have a negative effect on individuals' affect. More avoidant FWS may then over time be developed in response to these negative experiences. Their formulation may however not necessarily in itself be detrimental to individuals' well-being. In the discussion in Chapter 7 I have mentioned the possibility that avoidance in FWS may reflect individuals' attempts to create a future in which current unsatisfying circumstances and problems have been overcome. Avoidance in FWS narratives would then have a more distant and in fact a positive effect on individuals' well-being through instilling a sense of hope.

As argued above, the inductive content analysis of incidents of avoidance in FWS narratives also suggests further research questions. The personal characteristics

participants do not want to see in their future self are likely to be inspired by negative role models. Negative experiences and negative role models may inspire and enhance individuals' FWS by providing images of what to avoid. Research by Oyserman and colleagues (Oyserman & Markus, 1990; Oyserman & Saltz, 1993; Oyserman, Terry, & Bybee, 2002; Oyserman et al., 2004; see 2.1.5.5) suggests that in order to have a beneficial effect on self-regulation these negative images need to be matched by corresponding positive images of what it is one wants to attain. Future research may aim to explore the potentially interactive effect of feared and hoped for FWS in the setting and pursuit of proactive goals.

8.2.7 Summary

In conclusion, different characteristics of FWS can be meaningfully distinguished, both in the self-rated characteristics and in the characteristics of the FWS narratives. Self-rated characteristics and characteristics of the narratives may reflect similar aspects of a FWS – for example, the accessibility and elaboration of a FWS seem to both reflect the clarity of the image for the individual, and both evolve as significant predictors of proactive behaviour.

While it was based on an extensive review of the literature on future selves and has integrated past literature on the motivational impact of future selves, the present research only begins to tap into the complex effects of individuals' future-oriented identity work on their behaviour and well-being. Methodologically, it seems to provide further support for the fruitfulness of combining a narrative approach with rating scales to assess the perceived characteristics of future selves.

Some characteristics of future-oriented identities seem to determine their usefulness as a basis for mental simulation. For example, more elaborate FWS are more frequently associated with goals for skill development. More accessible FWS seem to enable individuals to increasingly shape their role and their tasks through negotiations with their supervisor, most likely by providing a sense of direction. Correspondingly, individuals with more uncertain FWS seem less likely to attempt to actively shape future, or their current environment.

Other characteristics of FWS appear to make it more or less risky for individuals to engage in proactive behaviours. An accessible FWS seems to shelter individuals from the potentially hurtful effects of negative feedback, while more

exclusive FWS, FWS individuals do not see alternatives to, appear to make their ego more vulnerable to negative feedback. Similarly, FWS that were focused on the distant rather than the near future emerged as significant predictors of negative feedback seeking over time (see above), which is consistent with the idea that goals at a greater temporal distance are associated with more risk taking (Pennington & Roese, 2003).

In conclusion, the significant relationships of some but not other characteristics of FWS with proactive goals and behaviours point towards the contribution this research makes by linking outcomes and reflections of individuals' future-oriented identity work (Grotevant, 1987) to goals and behaviours.

8.3 Theoretical implications and directions for future research

8.3.1 Implications for research on proactivity

Within the proactivity literature, there is consensus on proactive behaviour being intentional and directed by self-set goals (e.g., Frese & Fay, 2001; Frese et al., 1997; Frese et al., 1996; Grant & Ashford, 2008). Research on proactive behaviour has thus given a prominent role to individuals' agency in the pursuit of self-set goals. The role the self and personal goals play in the regulation of proactive behaviour has however received little theoretical or empirical attention.

In this thesis I have focused on the under-investigated role of the anticipation phase in the proactive behaviour process (Grant & Ashford, 2008). I set out to answer the question how proactive goals are generated and pursued. While several process models of proactive behaviour acknowledge the role of anticipation and mental simulation in the setting of proactive goals (Bindl & Parker, 2009; Grant & Ashford, 2008), to date little attention has been given to how mental simulations that lead to the setting of proactive goals are created, and how these fantasies are turned into proactive goals. I have proposed that proactive goals are at least partially derived from future-oriented identities. Drawing on the extensive literature on possible selves I have introduced the more specific concept of the future work self (FWS) – a hoped for, ideal image of the self in the future in relation to work. I have argued that FWS

create discrepancies between the present self or situation and a desired future, and that these discrepancies lead to the setting of proactive goals.

My findings provide preliminary support for the role of future selves in the generation of proactive goals. A clear image of a discrepant future self appears to serve as a basis for mental simulation that enables individuals to set proactive goals. This shifts our attention from antecedents that make it more or less likely for individuals to attempt to reduce perceived discrepancies between what is and what ideally could be to factors that influence individuals' ideas of what could be (K. Strauss & Griffin, 2009). Previous research has focused on how individuals decide on whether or not to behave proactively and has identified individual differences and situational factors that influence their valence- and expectancy judgements in relation to a proactive goal. My research however focuses on the mental creation rather than the active reduction of discrepancies between the status quo and a more desirable state. Consequently, future research may explore variables influencing individuals' ideas of what the future would ideally look like. In particular, the role of leaders and mentors in the exploration and formation of FWS may prove a fruitful area of research.

In the empirical part of this thesis I have focused exclusively on personal FWS. In my theoretical work I have however argued that FWS on different levels of the self-concept can be mapped onto proactive behaviours aiming to benefit different targets. In Chapter 2 I have argued that relational FWS may motivate proactive behaviours aimed at developing or improving the respective role relationship, while collective FWS may motivate proactive behaviours directed towards achieving the hoped for future of the team or organization – behaviours aimed at taking control of, and bringing about change within, the internal organizational environment, as well as behaviours aimed at initiating change at a more strategic level. Future research may aim to explore whether the relationship between the FWS and proactive behaviour and goals can also be replicated for relational and collective FWS. In particular collective FWS may provide a fruitful area of research. Collective FWS potentially align individuals' self-set goals with the organization's and may thus provide a

solution to the Initiative Paradox⁸² as I argue elsewhere (K. Strauss, Griffin, & Parker, 2009).

Future research may also explore the outcomes of setting and pursuing proactive goals that are linked to one's FWS. FWS provide the motivational resource for individuals to engage in effortful behaviours that might be costly in the short term yet beneficial in the long term. Longitudinal research may in the future explore whether striving to attain a personal, relational, or collective FWS has beneficial effects and may lead to the creation of sustainable jobs, careers, and organizations. I have proposed that the pursuit of proactive goals linked to FWS will have primarily beneficial effects. FWS can enable individuals to shape their job and their environment to make it more congruent with their current values and needs, but also with values and needs they anticipate having in the future. While perceiving the present as only a transitory step to a better future may help individuals put up with currently unsatisfying circumstances (Fried & Slowik, 2004), it is however also possible that there are downsides to proactively pursuing a desired future self.

It may be that some proactive behaviours are less likely to be linked to FWS than others. A personal FWS of running her own business as a tree surgeon may enable a landscape gardener to anticipate future skill requirements and shape her current role in a way that will enable her to acquire these skills, for example by taking on additional tasks such as writing quotes for prospective clients. An engineer who notices a minor aberration in the production process and takes action to prevent future problems may not be as mindful of the connection between her proactive behaviour and a desired future-oriented identity. Future research may attempt to distinguish between proactive behaviour that is consciously linked to a desirable future, and proactive behaviour that is less driven by mental simulations of the future. It is possible that some proactive goals arise from discrepancies that are generated not by future selves but by environmental cues, such as in the example of the engineer.

⁸² Leaders managing proactive behaviour in the workplace are faced with what Campbell (2000, p. 57) called the "Initiative Paradox": Employees are required to show initiative and independent judgment, but the proactive goals they choose should still be in line with the organizational goals.

8.3.2 Implications for research on future selves

In organization studies, research on identity has mostly focused on the construction of current (individual or organizational) identities, and on identification⁸³, partly because of the association between organizational outcomes, and employees identification with organizationally relevant targets (see Riketta, 2005; and Riketta & Van Dick, 2005 for meta-analyses). (Current) identities and processes of identification are likely to be closely linked to individuals' exploration and formation of their personal, relational, and collective FWS. However, as discussed extensively throughout this thesis future-oriented identities have very different implications for behaviour, self-evaluation, and well-being. Their future-focus provides latitude for correction and enables the setting of more ambitious, maximal goals; it enables individuals to think about what they want to achieve in a more creative way, without the constraints of having to be realistic or accurate.

Drawing on Habermas (1972), Alvesson, Ashcraft, and Thomas (2008) identify three different theoretical frameworks underlying identity scholarship in organization studies, all of which postulate some link between identity and behaviour. Below, I briefly outline these three theoretical approaches before applying them as a framework for future research directions.

Functional research aims to explore cause-and-effect relations, and to relate identity and identification to outcomes improving organizational effectiveness. Interpretivist research aims to understand how meaning is generated and transformed through communication, how identities are crafted in social interactions, and how identity narratives are being constructed in social contexts. Research with a critical orientation finally is concerned with issues of power, identity and resistance. Future research may follow these different philosophical approaches that have previously been applied to studying identity in organizational behaviour research to further explore the concept of the FWS.

Taking a functional approach, questions warranting further attention by future research may include: Can FWS facilitate the achievement of future-oriented P-E-fit, and thus over time contribute to individual performance and well-being (c.f. L. A.

⁸³ As Ashforth, Harrison, and Corley (2008) put it, identity "capture[s] the essence of who people are, and thus, why they do what they do", while identification reflects "the process by which people come to define themselves, communicate that definition to others, and use that definition to navigate their lives, work-wise or other" (p. 334).

King et al., 1998)? Do FWS motivate broader proactive work behaviours such as individual task proactivity which contribute to organizational effectiveness in uncertain and dynamic environments? Can collective FWS provide a mechanism for aligning individuals' self-set proactive goals with organizational objectives (see K. Strauss, Griffin, & Parker, 2009)? Is the pursuit of FWS associated with greater subjective or objective career success? And extending the present research: What makes a FWS most effective in the regulation of proactive behaviour?

From an interpretivist perspective, future research may focus on the role of identity work, i.e., "the ongoing mental activity that an individual undertakes in constructing an understanding of self that is coherent, distinct and positively valued" (Alvesson et al., 2008, p. 15). Identity work is prompted by at least some extent of self-doubt, and by inconsistencies in social interactions (Alvesson & Willmott, 2002). The majority of directions for future research I have outlined in 8.2.2 as part of the integrated discussion of the findings regarding the different characteristics of FWS can be seen as taking an interpretivist perspective. Interpretivist research exploring the construction of future work selves may further focus on questions such as: How are FWS reconstructed after failures or set-backs, and what are implications for individuals' well-being and performance (c.f. L. A. King & Raspin, 2004; Pizzolato, 2007; Plimner & Schmidt, 2007)? What is the role of mentors and leaders in the construction of FWS (c.f. Fletcher, 2000; Ibarra, 1999)? What are cultural influences on the construction of FWS (c.f. Unemori, Omoregie, & Markus, 2004)? What is the role of FWS in the construction of a broader longitudinal work-oriented identities (c.f. Fugate et al., 2004)? When does the construction of FWS occur, continuously, as a result of critical incidents or transitions, or as a result of repeated frustrations (c.f. Alvesson et al., 2008)? Can FWS ever be achieved, or are they continuously redefined?

Research adopting a critical philosophical perspective may finally focus on questions such as: How do organizations and leaders control and restrict FWS? How do individuals resist others' attempts to shape their FWS? Can FWS be used as a means of resistance against organizational regulation, for example if FWS are located outside the organization, or if elements of supervisory control inspire feared FWS?

In conclusion, research on identity work has mainly focused on how current individual and collective identities are constructed, and has explored how individuals answer the questions of “who am I?” and “who are we?” Future research may explore the identity work involved in the exploration and formation of future-oriented identities such as the FWS, at both the individual level of the personal or relational FWS, and at the collective level. Addressing the questions “who will I be?” and “who will we be?” may not only provide a clearer view of our present individual- and collective identity, but may in itself provide a source of meaning, and a tool for self-regulation.

8.4 Limitations of the thesis

Within this thesis, there are several real and potential limitations. Limitations of the four studies have already been addressed in the respective chapters. Here I briefly summarize the major limitations regarding the power of the longitudinal analyses, the generalizability of results, the content analyses of FWS narratives and associated strategies, the adapted time frame, and untested mediators.

8.4.1 Limitations arising from the study design

As discussed in 3.4.3, the present study was not originally conceptualized as longitudinal, and participants did not initially commit to taking part in longitudinal research which may explain the relatively low case number of in the longitudinal sample. Due to the small sample low statistical power is a major limitation in this thesis. When power levels are low, Type II (β) error rates increase. Type II errors occur when the null hypothesis is retained based on non-significant results, while the effect in fact holds in the population (Neyman & Pearson, 1933). The size of the longitudinal sample (see Chapter 6 and Chapter 7) would only have allowed for the detection of medium to large effects (c.f. Cohen, 1988). Small effects of the FWS on proactive behaviour would thus not have been detected in these studies, even if they were present in the population.

8.4.2 Generalizability of findings

Two major threats to the external validity of my findings can be identified. The first one arises from the chosen sample. I have argued (see 3.3 and 4.5.2) that postgraduate research students are an appropriate sample for the study of FWS and proactive behaviour because these students face a more or less impending career transition, and because proactive career management is a competency that postgraduate research students are expected to develop during the course of their PhD degree program. However, while these characteristics make postgraduate research student a fruitful target population for the present research, they may also limit the generalizability of my findings to employees with relatively stable careers, and to fields where proactive career management is not explicitly required. Proactive career behaviours are however particularly important for knowledge workers for whom the present sample may be relatively representative. Future research will however have to attempt to replicate these findings in non-student populations and populations in which career transitions are less salient.

Future research also needs to explore the present and future-oriented aspects of career identities in samples with a more durable current identity, as postgraduate research students are likely to have future work selves that are highly discrepant from their current identity as a graduate student. In occupational samples the distinction between current- and future-oriented career identities may not be as clear.

The second threat to the external validity of this research lies in the self-selection of participants into the study. The representativeness of particularly the longitudinal sample for the general population of postgraduate research students is questionable. Students who participated in both studies were more conscientious, agreeable, and open to experience, and reported lower negative affect. They had more accessible FWS and produced more elaborate FWS narratives. These differences are not surprising. Participants who at Time 1 found it difficult to generate a FWS narrative may have decided to not take part in the study again. Similarly, participants high in conscientiousness, agreeableness, and openness to experience were more likely to participate in the survey. Respondent samples tend to not be representative of the population regarding their conscientiousness and agreeableness (Rogelberg et al., 2003). This may have been additionally accelerated by the considerable time and cognitive effort the web-survey required. While the lack

of representativeness of the longitudinal sample clearly limits the generalizability of findings, the present sample may have provided a more conservative test of hypotheses. In a representative sample there will be a greater variance in the accessibility of FWS and the elaboration of FWS narratives; this would make it more likely to detect differences between participants who have a clear image of their FWS, and those who have not. Future research may aim to reduce this self-selection bias and assess a more representative sample.

8.4.3 Limitations of content analyses

Ratings by two independent raters provided reliable estimations of the characteristics of FWS narratives. There are however limitations associated with this approach. Practical limitations meant that some potentially interesting characteristics of narratives, for example the use of emotional language, were not rated. The emphasis on interrater agreement in the development of the coding instructions may have led to an oversimplification of coding dimensions. Ratings may be categorical rather than continuous. This is most apparent in the non-linear nature of uncertainty ratings which reflect both individuals' uncertainty about what they would want their future to be like, and about their ability to bring this future about. For uncertainty ratings, the interrater reliability was also slightly below the cut-off of .7 generally considered acceptable ($\alpha = .67$ at Time 1, $\alpha = .63$ at Time 2).

Practical considerations also limited the content analyses applied to the up to three goals participants were currently pursuing in order to bring about their FWS. As part of this thesis, I have focused on networking and skill development as two relevant proactive career behaviours. A content analysis of all listed goals following the approach by Bateman and colleagues (2002) may however provide a comprehensive taxonomy of postgraduate research students' goals in relation to their FWS, and enable the identification of proactive goals without the restrictions of existing classifications of proactive career behaviours. As there are few taxonomies of self-set work-related goals (see Bateman et al., 2002; Roberson, 1989, for exemptions; 1990) a taxonomy of career-related mid-level goals of postgraduate research students may provide a fruitful basis for future research on self-set goals.

In addition, there were only low correlations between the self-reported proactive behaviours, and the corresponding proactive goals. It is possible that an

individual would see a particular behaviour as linked to their FWS and may still not engage in it very frequently. Future research may more fully explore both proactive goals and corresponding behaviour.

8.4.4 Time frame

Further limitations arise from the time frame of the studies. Previous longitudinal research on the link between future selves and behaviour has adapted similar time frames (e.g., Oyserman et al., 2004), or has explored the effects of future selves over longer time periods (L. A. King, 2001; Oyserman et al., 2006; Smith & Freund, 2002). However, in the ongoing future-oriented identity work of exploring and formulating one's FWS, changes may occur more dynamically and within shorter time frames. Shorter time frames and additional time points may have been able provided insights into the potentially reciprocal relationship between proactive career behaviours and FWS characteristics. For example, I have argued that FWS may motivate proactive behaviours such as career consultation and career planning. These behaviours are however also likely influence the exploration and formation of FWS. Future research may explore the usefulness of qualitative methods in investigating these processes in more detail.

8.4.5 Untested mediators

In the conceptual part of this thesis I have proposed mechanisms through which FWS would motivate to the setting and pursuit of proactive goals. However, I have addressed only few of these mechanisms in my empirical work. I have argued that FWS add value to proactive goals. With regard to feedback seeking, my findings have indeed supported the idea that certain characteristics of FWS motivate individuals to shelter themselves from potentially hurtful negative feedback, while other characteristics can make the value of critical feedback more salient. I have proposed that FWS served as a basis for mental simulation that would enable individuals to identify pathways and future resource requirements, creating discrepancies that necessitate the setting of proactive goals. Content analyses of goals individuals were pursuing in order to bring about their FWS provided some initial support for the idea that proactive behaviours were indeed aimed at creating a desired future.

These findings only provide some initial support for the proposed mechanisms. Further mechanisms have not been addressed in the present thesis. For example, I have proposed that FWS instil a sense of hope and optimism that would enable individuals to pursue future-oriented goals and recover from set-backs and failures. Future research may explore these and further mechanisms through the inclusion of potential mediators in longitudinal research.

8.5 Practical implications

As argued in 8.3.1, previous research has focused on individual differences and situational factors that influence individuals' valence- and expectancy judgements in relation to a proactive goal, or has explored their interactions. Practical implications to enhance proactivity in individuals that arise from previous research are for example: creating favourable circumstances in which individuals do not perceive it as risky to speak out with ideas for improvement (Dutton et al., 1997); increasing individuals' confidence in their ability to successfully engage in proactive behaviour (Parker, 2000; Parker et al., 2006); or selecting individuals high in proactive personality (J. A. Thompson, 2005). The recommendations arising from this stream of research concern factors that make it more or less likely for individuals to proactively change the status quo – the status quo of their work role, their team, their social network, their skill set, their performance, or their organization.

My research aims to address the question: what is it individuals engaging in proactive behaviour try to change the status quo *to*? As summarized above, my findings provide initial support for the role of the FWS in creating the discrepancies that lead to the generation of proactive goals, and in adding meaning to costly, future-oriented behaviour. Practical recommendations thus arise from insights into what makes FWS effective in the regulations of proactive behaviour, as I outline below.

In the context of the present sample, these practical implications of the findings regarding the motivation of proactive career behaviours in postgraduate research students are of particular importance. Concerns about postgraduate research students' employability have led to initiatives in the UK (e.g., United Kingdom Research Councils and the Arts and Humanities Research Board, 2001; Vitae, formerly the UK GRAD programme), in Australia (e.g., Council of Australian Deans

and Directors of Graduate Studies, 2005), in Canada (e.g., Evers et al., 2003), and in the US (e.g., Gaff et al., 2003), aiming to enhance students' career management and employability.

Having a clear, vivid image of one's FWS emerged as a significant predictor of a variety of proactive behaviours; it was associated with higher self-reported proactive behaviour and with the pursuit of proactive goals. Future selves and self-focused imagery have been suggested as a useful tool in career counselling (e.g., Fletcher, 2000; Krieshok et al., 1999; Meara et al., 1995; Plimmer & Schmidt, 2007). My findings provide further support for this idea, and point towards a potential mechanism through which mentors, supervisors and role models can encourage proactive career behaviour.

Postgraduate research students who envision their FWS as working academia seem to have more vivid ideas of what this future would entail. This suggests that they may have more opportunity to explore their future self based on role models (c.f. Ibarra, 1999). In order to provide postgraduate research students not committed to a career in academia with the opportunity to develop their FWS and ensure their future employability, higher education institutions may consider offering mentoring programs in industry or public service.

Encouraging the exploration and formation of FWS may help enhance individuals' proactive attempts to shape their future. In doing so, mentors and supervisors may however be faced with a balancing act between supporting both commitment and flexibility with regard to students' FWS.

Drawing on research on identity status (e.g., Berzonsky, 1992a; Berzonsky, 1992b, 2003; Marcia, 1966), my findings seem to point towards the importance of exploration rather than premature commitment in the formation of FWS. Individuals who prematurely commit to a FWS may be as motivated to bring it about as individuals who have achieved their FWS after extensive exploration; their FWS is however likely to be more narrow, more rigid, and thus more vulnerable. Although further research is needed to establish causality, not being able to imagine alternative future paths for oneself similarly seems to make individuals less open to self-relevant information (Chapter 4). More holistic FWS that also include relational aspects of individuals' future work life may not be most effective in driving proactive career behaviours, but consistent with self-complexity theory they may shelter individuals'

self-evaluation from negative feedback and setbacks. Mentors and supervisors thus need to encourage the formation of broad and flexible FWS, and point out multiple paths through which the core elements of the FWS could be achieved (Snyder et al., 1991; Snyder et al., 1996).

While exploration may be beneficial, a degree of certainty about the FWS may be necessary. In the present research (Chapter 6), postgraduate research students who were unsure about what they would like their future to be like were less motivated to plan the next steps of their career and to develop skills they may require in the future. While one may have expected that an uncertain FWS may lead to increased exploration over time, this does not seem to be the case. This in fact points towards a problematic link between uncertainty and proactive career management. Those who are relatively certain about their FWS are more likely to expose themselves to career-relevant information. Those with highly uncertain FWS seem to avoid the confrontation with their unknown future, and miss out on opportunities to explore their FWS. Higher education institutions may wish to target career development initiatives specifically at the second group, and identify ways to connect with students who are unlikely to seek out career-relevant information by themselves.

Finally, FWS may be a useful tool through which individuals may achieve fit between their future self, and their future environment. Encouraging individuals to think about not only the resources they require from their environment at present, but to also anticipate future resource requirements may enable them to take a more long-term perspective towards their career. FWS may provide the guidance needed to achieve authentic and thus sustainable careers.

In conclusion, mentors and supervisors need to facilitate both certainty and flexibility when encouraging students to engage with their FWS. While it is unlikely that the future will turn out exactly the way we hope and envision it, FWS provide a sense of direction. They may be most useful when they are not seen as specific goals but as subject to ongoing exploration and modification. Rather than providing an ultimate destination, FWS may function as lighthouses individuals may use to navigate through the fog of possibilities.

8.6 Conclusion

In this thesis I have focused on individuals' agentic attempts to shape their future, and contribute to the fast-growing literature on proactivity. I have introduced the future work self, the work-related identity individuals hope to hold in the future, as a motivator of proactive behaviour. More specifically, I have argued that individuals' future work self plays an important role in the creation of discrepancies that underlie individuals' agency, and facilitates the setting and pursuit of proactive goals. The findings of this thesis have provided initial support for the usefulness of the concept of the future work self in the motivation of proactive behaviour. This emphasises the importance of processes of anticipation and mental simulation in the proactive behaviour process, and introduces the concepts of identity and self-concept as motivators of proactive behaviour.

In addition to contributing to the literature on proactivity, I also aim to contribute to an integration of the concept of future selves into the broader organizational behaviour literature. While the concept of future-oriented identities has been successfully applied in research on career development, health psychology, educational psychology, and life span psychology, the concept has not been widely applied to organizational behaviour with the exemption of some work in the field of leadership (Lord, Brown, & Freiberg, 1999; Sosik, 2000), and professional identity (Ibarra, 1999, 2007). Future selves link identity to goals, and thus provide a useful framework for our understanding of individuals' self-set goals, which become more and more important as tasks, roles, and career paths become increasingly unpredictable and difficult to prescribe.

Finally, this thesis suggests directions for future research on individuals' future-oriented identity work. Research on identity work has mainly focused on how current individual and collective identities are constructed, and has explored how individuals answer the questions of "who am I?" and "who are we?" Where future-oriented identities have been taken into consideration, they have mainly been viewed as a means of exploring current identities. Future research may however explore the identity work involved in the exploration and formation of future-oriented identities such as the FWS. Addressing the questions "who will I be?" and "who will we be?" may not only provide a clearer view of our present individual- and collective identity, but may in itself provide a source of meaning, and a tool for self-regulation.

References

- Aaker, D. a., Kumar, V., & Day, G. S. (1995). *Marketing research*. Ney York: John Wiley.
- Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* (Vol. 2, pp. 267-299). New York: Academic Press,.
- Ainslie, G. (1992). *Picoeconomics: The strategic interaction of successive motivational states within the person*. New York: Cambridge University Press.
- Ainslie, G., & Haslam, N. (1992). Hyberbolic discounting. In G. Loewenstein & J. Elster (Eds.), *Choice over time* (pp. 57-92). New York: Russell Sage Foundation.
- Akerlof, G. A. (1991). Procrastination and obedience. *American Economic Review*, 81, 1-19.
- Albrecht, K., & Zemke, R. (1985). *Service America: Doing business in the new economy*. Homewood, IL: Dow Jones-Irwin.
- Aloise-Young, P. A., Hennigan, K. M., & Leong, C. W. (2001). Possible selves and negative health behaviors during early adolescence. *Journal of Early Adolescence*, 21(2), 158 - 181.
- Alvesson, M., Ashcraft, K. L., & Thomas, R. (2008). Identity matters: Reflections on the construction of identity scholarship in organization studies. *Organization*, 15(1), 5-28.
- Alvesson, M., & Willmott, H. (2002). Producing the appropriate individual: Identity regulation as organizational control. *Journal of Management Studies*, 39(5), 619-644.
- Amabile, T. M., Hill, K. G., Hennessy, B. A., & Tighe, E. M. (1994). The work preference inventory: Assessing intrinsic and extrinsic motivational orientations. *Journal of Personality and Social Psychology*, 66(5), 950-967.
- Anderman, E. M., Anderman, L. H., & Griesinger, T. (1999). The relation of present and possible academic selves during early adolescence to grade point average and achievement goals. *The Elementary School Journal*, 100(1), 3 - 17.
- Anderson, J. R., & Schooler, L. J. (1991). Reflections of the environment in memory. *Psychological Science*, 2, 396-408.

- Andersson, L. M., & Bateman, T. S. (2000). Individual environmental initiative: Championing natural environmental issues in U.S. business organizations. *Academy of Management Journal*, 43(4), 548-570.
- Anseel, F., Lievens, F., & Levy, P. E. (2007). A self-motives perspective on feedback-seeking behavior: Linking organizational behavior and social psychology research. *International Journal of Management Reviews*, 9(3), 211-236.
- Anthis, K. S., Dunkel, C. S., & Anderson, B. (2004). Gender and identity status differences in late adolescents' possible selves. *Journal of Adolescence*, 27, 147-152.
- Aragon-Correa, J. A. (1998). Strategic proactivity and firm approach to the natural environment. *Academy of Management Journal*, 41(5), 556-567.
- Aragon-Correa, J. A., Hurtado-Torres, N., Sharma, S., & Garcia-Morales, V. J. (2008). Environmental strategy and performance in small firms: A resource-based perspective. *Journal of Environmental Management*, 86(1), 88-103.
- Arthur, M. B., Inkson, D., & Pringle, J. (1999). *The new careers: Individual action and economic change*. London: Sage.
- Arthur, M. B., & Rousseau, D. M. (1996). *The boundaryless career: A new employment principle for a new organizational era*. New York: Oxford University Press.
- Ashford, S. J. (1986). Feedback-seeking in individual adaptation: A resource perspective. *Academy of Management Journal*, 29(3), 465-487.
- Ashford, S. J., & Black, J. S. (1996). Proactivity during organizational entry: The role of desire for control. *Journal of Applied Psychology*, 81(2), 199-214.
- Ashford, S. J., Blatt, R., & VandeWalle, D. (2003). Reflections on the looking glass: A review of research on feedback-seeking behavior in organization. *Journal of Management*, 29(6), 773-799.
- Ashford, S. J., & Cummings, L. L. (1983). Feedback as an individual resource: Personal strategies of creating information. *Organizational Behavior and Human Performance*, 32, 370-398.
- Ashford, S. J., Rothbard, N. P., Piderit, S. K., & Dutton, J. E. (1998). Out on a limb: The role of context and impression management in selling gender-equity issues. *Administrative Science Quarterly*, 43(1), 23-57.

- Ashford, S. J., & Tsui, A. S. (1991). Self-regulation for managerial effectiveness: The role of active feedback seeking. *Academy of Management Journal*, 34(2), 251-280.
- Ashforth, B. E., & Fugate, M. (2001). Role transitions and the life span. In B. E. Ashforth (Ed.), *Role transitions in organizational life: An identity-based perspective*. Mahwah, NJ: Lawrence Erlbaum.
- Ashforth, B. E., Harrison, S. H., & Corley, K. G. (2008). Identification in organizations: An examination of four fundamental questions. *Journal of Management*, 34, 325-374.
- Ashforth, B. E., Sluss, D. M., & Saks, A. M. (2007). Socialization tactics, proactive behavior, and newcomer learning: Integrating socialization models. *Journal Of Vocational Behavior*, 70, 447-462.
- Aspinwall, L. G. (2005). The psychology of future-oriented thinking: From achievement to proactive coping, adaptation, and aging. *Motivation and Emotion*, 29(4), 203-235.
- Aspinwall, L. G., & Taylor, S. E. (1997). A stitch in time: Self-regulation and proactive coping. *Psychological Bulletin*, 121(3), 417-436.
- Atance, C. M., & O'Neill, D. K. (2001). Episodic future thinking *Current trends in Cognitive Sciences*, 5(12), 533-539.
- Atkinson, J. W. (1964). *An introduction to motivation*. Princeton, NJ: Van Nostrand.
- Austin, J. T., Boyle, K. A., & Lualhati, J. C. (1998). Statistical conclusion validity for organizational science researchers: A review. *Organizational Research Methods*, 1(2), 164-208.
- Avolio, B. J., Zhu, W. C., Koh, W., & Bhatia, P. (2004). Transformational leadership and organizational commitment: Mediating role of psychological empowerment and moderating role of structural distance. *Journal Of Organizational Behavior*, 25(8), 951-968.
- Axtell, C. M., Holman, D. J., Unsworth, K. L., Wall, T. D., & Waterson, P. E. (2000). Shop floor innovation: Facilitating the suggestion and implementation of ideas. *Journal Of Occupational And Organizational Psychology*, 73(3), 265-285.

- Axtell, C. M., Holman, D. J., & Wall, T. D. (2006). Promoting innovation: A change study. *Journal Of Occupational And Organizational Psychology*, 79, 509-516.
- Bachman, J., O'Maley, P., & Johnston, J. (1978). *Adolescence to adult change and stability in the lives of young men*. Ann Arbor: University of Michigan Press.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Inglewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1989). Human agency in Social Cognitive theory. *American Psychologist*, 44(9), 1175-1184.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Bandura, A. (2001). Social Cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52, 1-26.
- Bandura, A., & Locke, E. A. (2003). Negative self-efficacy and goal effects revisited. *Journal of Applied Psychology*, 88(1), 87-99.
- Bargh, J. A. (1982). Attention and automaticity in the processing of self-relevant information. *Journal of Personality and Social Psychology*, 43, 425-436.
- Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York: Free Press.
- Bass, B. M. (1990). *Bass & Stogdill's Handbook of Leadership*. New York: Free Press.
- Bateman, T. S., & Crant, J. M. (1993). The proactive component of organizational-behavior: A measure and correlates. *Journal Of Organizational Behavior*, 14(2), 103-118.
- Bateman, T. S., O'Neill, H., & Kenworthy-U'Ren, A. (2002). A hierarchical taxonomy of top managers' goals. *Journal of Applied Psychology*, 87(6), 1134-1148.
- Baumeister, R. F. (1999). Self-concept, self-esteem, and identity. In V. J. Derlega, B. A. Winstead & W. H. Jones (Eds.), *Personality: Contemporary Theory and Research* (2nd ed., pp. 246-280). Chicago: Nelson Hall Inc.
- Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. (2001). Bad is stronger than good. *Review of General Psychology*, 5(4), 323-370.

- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497-529.
- Baumgardner, A. H. (1990). To know oneself is to like oneself: Self-certainty and self-affect. *Journal of Personality and Social Psychology*, 58, 1062-1072.
- Bell, N. E., & Staw, B. M. (1989). People as sculptors versus sculpture: The roles of personality and personal control in organizations. In M. B. Arthur, T. H. Douglas & B. S. Lawrence (Eds.), *Handbook of Career Theory*. Cambridge: Cambridge University Press.
- Belschak, F. D., & Den Hartog, D. (2008). *Different foci of proactive behaviors and their antecedents*. Paper presented at the Institute of Work Psychology International Conference.
- Belschak, F. D., & Den Hartog, D. N. (in press). Pro-self, pro-social, and pro-organizational foci of proactive behavior: Differential antecedents and consequences. *Journal of Occupational and Organizational Psychology*.
- Berson, Y., Shamir, B., Avolio, B. J., & Popper, M. (2001). The relationship between vision strength, leadership style, and context. *Leadership Quarterly*, 12, 53-73.
- Berzonsky, M. D. (1988). Self-theorists, identity status, and social recognition. In D. K. Lapsley & F. C. Power (Eds.), *Self, ego, and identity: Integrative approaches* (pp. 243-262). New York: Springer.
- Berzonsky, M. D. (1989). The self as theorist: Individual differences in identity formation. *International Journal of Personal Construct Psychology*, 2, 363-376.
- Berzonsky, M. D. (1990). Self-construction over the life span: A process perspective on identity formation. In G. J. Neimeyer & R. A. Neimeyer (Eds.), *Advances in personal construct theory* (Vol. 1, pp. 155-186). Greenwich, CT: JAI Press.
- Berzonsky, M. D. (1992a). Identity style and coping strategies *Journal of Personality*, 60(4), 771-788.
- Berzonsky, M. D. (1992b). A process perspective on identity and stress management. In G. R. Adams, T. P. Gullotta & R. Montemeyer (Eds.), *Advances in adolescent development: Adolescent identity formation* (pp. 193-215). New Berry Park, CA: Sage.

- Berzonsky, M. D. (2003). Identity style and well-being: Does commitment matter? *Identity, 3*, 131-142.
- Bhagat, R. S., & London, M. (1999). Getting started and getting ahead: Career dynamics of immigrants. *Human Resource Management Review, 9*(3), 349-365.
- Bindl, U., & Parker, S. K. (2009). *Phases of proactivity: How do we actually go the extra mile?* Paper presented at the 14th European Congress of Work and Organizational Psychology.
- Bindl, U., & Parker, S. K. (in press). Proactive work behavior: Forward-thinking and changeoriented action in organizations. In S. Zedeck (Ed.), *APA handbook of industrial and organizational psychology*. Washington, DC: American Psychological Association.
- Black, J. S., & Ashford, S. J. (1995). Fitting in or making jobs fit: Factors affecting mode of adjustment for new hires. *Human Relations, 48*(4), 421-437.
- Black, M. E. A., Stein, K. F., & Loveland-Cherry, C. J. (2001). Older women and mammography screening behavior: Do possible selves contribute? *Health Education and Behavior, 28*(2), 200-216.
- Blau, G. J. (1985). The measurement and prediction of career commitment. *Journal of Occupational Psychology, 58*, 277-288.
- Blau, G. J. (1988). Further exploring the meaning and measurement of career commitment. *Journal of Vocational Behavior, 32*, 284-297.
- Blau, P. M. (1964). *Exchange and power in social life*. New York: Wiley.
- Boldero, J., & Francis, J. (2000). Self-regulation: The emotional and behavioral consequences of discrepancies with standards and goals. *International Journal of Psychology, 35*(3/4), 162.
- Boldero, J., & Francis, J. (2002). Goals, standards, and the self: Reference values serving different functions. *Personality and Social Psychology Bulletin, 6*(3), 232-241.
- Borthwick, J., & Wissler, R. (2003). *Postgraduate research students and generic capabilities: Online directions*. Canberra, Commonwealth of Australiao. Document Number)
- Bower, G. H. (1981). Mood and memory. *American Psychologist, 36*(2), 129-148.

- Brendl, C. M., & Higgins, E. T. (1996). Principles of judging valence: What makes events positive or negative? In M. Zanna (Ed.), *Advances in Experimental Social Psychology* (pp. 95-160). San Diego, CA: Academic Press.
- Brewer, M. B., & Gardner, W. (1996). Who is this "we"? Levels of collective identity and self representations. *Journal of Personality and Social Psychology, 71*(1), 83-93.
- Brickson, S. L. (2000). The impact of identity orientation on individual and organizational outcomes in demographically diverse settings. *Academy of Management Review, 25*(1), 82-101.
- Brickson, S. L. (2007). Organizational identity orientation: The genesis of the role of the firm and distinct forms of social value. *Academy of Management Review, 32*(3), 864-888.
- Brown, D. J., Cober, R. T., Kane, K., Levy, P. E., & Shalhopp, J. (2006). Proactive personality and the successful job search: A field investigation with college graduates. *Journal of Applied Psychology, 91*(3), 717-726.
- Bruner, J. (1990). *Acts of meaning*. Cambridge, MA: Harvard University Press.
- Buehler, R., & Griffin, D. (2003). Planning, personality, and prediction: The role of future focus in optimistic time predictions. *Organizational Behavior and Human Decision Processes, 92*(1-2), 80-90.
- Buehler, R., Griffin, D., & Ross, M. (1994). Exploring the planning fallacy: Why people underestimate their task completion times. *Journal of Personality and Social Psychology, 67*(3), 366-381.
- Buhr, K., & Dugas, M. J. (2002). The intolerance of uncertainty scale: Psychometric properties of the English version. *Behaviour Research and Therapy, 40*(8), 931-945.
- Cameron, J. E. (1999). Social identity and the pursuit of possible selves: Implications for the psychological well-being of university students. *Group Dynamics: Theory, Research, and Practice, 3*(3), 179 - 189.
- Campbell, D. J. (2000). The proactive employee: Managing workplace initiative. *Academy of Management Executive, 14*(3), 52-66.
- Campbell, J. D., Trapnell, P. D., Heine, S. J., Katz, I. M., Lavalee, L. F., & Lehman, D. R. (1996). Self-concept clarity: Measurement, personality correlates, and

- cultural boundaries. *Journal of Personality and Social Psychology*, 70(1), 141-156.
- Campion, M. A., & Lord, R. G. (1982). A control systems conceptualization of the goal-setting and changing process. *Organizational Behavior and Human Performance*, 30, 265-287.
- Cantor, N., & Kihlstrom, J. F. (1989). Social intelligence and cognitive assessments of personality. In R. S. Wyer, Jr. & T. K. Srull (Eds.), *Advances in Social Cognition* (Vol. 2, pp. 1-59). Hillsdale, NJ: Erlbaum.
- Cantor, N., Norem, J., Langston, C., Zirkel, S., Fleeson, W., & Cook-Flannagan, C. (1991). Life tasks and daily life experience. *Journal of Personality*, 59(3), 425-451.
- Carroll, B., & Levy, L. (2008). Defaulting to management: Leadership defined by what it is not. *Organization*, 15(1), 75-96.
- Carson, K. D., & Bedeian, A. G. (1994). Career commitment: Construction of a measure and examination of its psychometric properties. *Journal of Vocational Behavior*, 44, 237-262.
- Carver, C. S., Lawrence, J. W., & Scheier, M. F. (1999). Self-discrepancies and affect: Incorporating the role of feared selves. *Personality and Social Psychology Bulletin*, 25, 783-792.
- Carver, C. S., Reynolds, S. L., & Scheier, M. F. (1994). The possible selves of optimists and pessimists. *Journal of Research in Personality*, 28, 133 - 141.
- Carver, C. S., & Scheier, M. F. (1981). *Attention and self-regulation: A control-theory approach to human behavior*. New York: Springer.
- Carver, C. S., & Scheier, M. F. (1982). Control theory: A useful conceptual framework for personality-social, clinical, and health psychology. *Psychological Bulletin*, 92(1), 111-135.
- Carver, C. S., & Scheier, M. F. (1990a). Origins and functions of positive and negative affect: A control-process theory. *Psychological Review*, 97(1), 19-35.
- Carver, C. S., & Scheier, M. F. (1990b). Principles of self-regulation: Action and emotion. In E. T. Higgins & R. M. Sorrentino (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (Vol. 2, pp. 3-52). New York: Guilford.

- Carver, C. S., & Scheier, M. F. (1998). *On the self-regulation of behavior*. New York: Cambridge University Press.
- Carver, C. S., & Scheier, M. F. (1999). Themes and issues in the self-regulation of behavior. In R. S. Wyer, Jr. (Ed.), *Perspectives on behavioral self-regulation: Advances in social cognition* (pp. 1-105). Mahwah, NJ: Erlbaum.
- Carver, C. S., & Scheier, M. S. (2005). Optimism. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 231-243). Oxford: Oxford University Press.
- Cascio, W. F. (1995). Whither industrial and organizational psychology in a changing world of work? *American Psychologist*, *50*(11), 928-939.
- Chan, D. (2006). Interactive effects of situational judgement effectiveness and proactive personality on work perceptions and work outcomes. *Journal of Applied Psychology*, *91*(2), 475-481.
- Chatman, J. A. (1989). Improving interactional organizational research: A model of person-organization fit. *Academy of Management Review*, *14*, 333-349.
- Choi, J. N. (2007). Change-oriented organizational citizenship behavior: Effects of work environment characteristics and intervening psychological processes. *Journal of Organizational Behavior*, *28*(4), 467-484.
- Claes, R., & Ruiz-Quintanilla, S. A. (1998). Influences of early career experiences, occupational group, and national culture on proactive career behavior. *Journal of Vocational Behavior*, *52*, 357-378.
- Cohen, J. (1988). *Power analysis for the behavioral sciences*. New York: Erlbaum.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*(1), 155-159.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences*. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Cook, C., Heath, F., & Thompson, R. L. (2000). A meta-analysis of response rates in web- or internet-based surveys. *Educational and Psychological Measurement*, *60*(6), 821-836.
- Corman, S. R. (1990). Computerized vs. pencil and paper collection of network data. *Social Networks*, *12*, 375-384.
- Council of Australian Deans and Directors of Graduate Studies. (2005). Guidelines to support the framework for best practice in generic capabilities for research

- students in Australian universities [Electronic Version], from www.ddogs.edu.au/download/2133773151
- Couper, M. P., & Rowe, B. (1996). Evaluation of a computer-assisted self-interview component in a computer-assisted personal interview survey. *Public Opinion Quarterly*, 60, 89-105.
- Crant, J. M. (1995). The proactive personality scale and objective job performance among real estate agents. *Journal of Applied Psychology*, 80(4), 532-537.
- Crant, J. M. (2000). Proactive behavior in organizations. *Journal of Management*, 26(3), 435-462.
- Crant, J. M., & Bateman, T. S. (2000). Charismatic leadership viewed from above: The impact of proactive personality. *Journal of Organizational Behavior*, 21, 63-75.
- Craswell, G. (2007). Deconstructing the skills training debate in doctoral education. *Higher Education Research and Development*, 26(4), 377-391.
- Crawford, J. R., & Henry, J. D. (2004). The Positive and Negative Affect Schedule (PANAS): Construct validity, measurement properties and normative data in a large non-clinical sample. *British Journal of Clinical Psychology*, 43, 245-265.
- Crawford, S. D., Couper, M. P., & Lamias, M. J. (2001). Web surveys: Perceptions of burden. *Social Science Computer Review*, 19(2), 146-162.
- Cropanzano, R., James, K., & Citera, M. (1993). A goal hierarchy model of personality, motivation, and leadership. *Research in Organizational Behavior*, 15, 267 - 322.
- Cross, S. E., & Markus, H. R. (1991). Possible selves across the life span. *Human Development*, 34, 230 - 255.
- Csikszentmihalyi, M., & Nakamura, J. (1999). Emerging goals and the self-regulation of behavior. In R. S. J. Wyer (Ed.), *Perspectives on behavioral self-regulation* (Vol. 12, pp. 107-118). Mahwah, NJ: Lawrence Erlbaum Associates.
- Cummings, T. G., & Cooper, C. L. (1979). Cybernetic framework for studying occupational stress. *Human Relations*, 32, 395-418.
- Davitz, J. R. (1952). The effects of previous training on postfrustration behavior. *Journal of Abnormal and Social Psychology*, 47, 309-315.

- Dawis, R. V., England, G. W., & Lofquist, L. H. (1964). A theory of work adjustment. University of Minnesota.
- Dawis, R. V., & Lofquist, L. H. (1978). A note on the dynamics of work adjustment. *Journal of Vocational Behavior*, 12(1), 76-78.
- Dawis, R. V., Lofquist, L. H., & Weiss, D. J. (1968). A theory of work adjustment (A revision). University of Minnesota.
- deCharms, R. (1968). *Personal causation*. New York: Academic Press.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268.
- Deci, E. L., & Ryan, R. M. (2002). *Handbook of self-determination research*. Rochester, NY: University of Rochester Press.
- Defillippi, R. J., & Arthur, M. B. (1994). The boundaryless career: A competency-based perspective. *Journal Of Organizational Behavior*, 15(4), 307-324.
- Den Hartog, D. N., & Belschak, F. D. (2007). Personal initiative, commitment and affect at work. *Journal of Occupational And Organizational Psychology*, 80(4), 601-622.
- Derryberry, D., & Tucker, D. M. (1994). Motivating the focus of attention. In P. M. Neidenthal & S. Kitayama (Eds.), *The heart's eye: Emotional influences in perception and attention* (pp. 167-196). San Diego, CA: Academic Press.
- Dillman, D. A. (2000). *Mail and internet surveys: The tailored design method* (2nd ed.). New York: John Wiley.
- Dubin, R., & Champoux, J. E. (1975). Workers' central life interests and personality characteristics. *Journal of Vocational Behavior*, 6, 165-174.
- Dunkel, C. S. (2000). Possible selves as a mechanism for identity exploration. *Journal of Adolescence*, 23, 519-529.
- Dunkel, C. S., & Anthis, K. S. (2001). The role of possible selves in identity formation: A short-term longitudinal study. *Journal of Adolescents*, 23, 519-529.

- Dunn, E. W., & Laham, S. M. (2006). A user's guide to emotional time travel: Progress on key issues in affective forecasting. In J. P. Forgas (Ed.), *Affect in social thinking and behavior* (pp. 177-196). New York: Psychology Press.
- Dutton, J. E., & Ashford, S. J. (1993). Selling issues to top management. *Academy Of Management Review*, 18(3), 397-428.
- Dutton, J. E., Ashford, S. J., Lawrence, K. A., & Miner-Rubino, K. (2002). Red light, green light: Making sense of the organizational context for issue selling. *Organization Science*, 13(4), 353-369.
- Dutton, J. E., Ashford, S. J., O'Neill, R. M., Hayes, E., & Wierba, E. E. (1997). Reading the wind: How middle managers assess the context for selling issues to top managers. *Strategic Management Journal*, 18(5), 407-423.
- Dutton, J. E., Ashford, S. J., O'Neill, R. M., & Lawrence, K. A. (2001). Moves that matter: Issue selling and organizational change. *Academy of Management Journal*, 44(4), 716-736.
- Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist*, 41, 1040-1048.
- Dweck, C. S. (1999). *Self-theories: Their role in motivation, personality, and development*. Philadelphia, PA: Psychology Press.
- Easterbrook, J. A. (1959). The effect of emotion on cue utilization and the organization of behavior. *Psychological Review*, 66, 183-201.
- Eby, L. T., Butts, M., & Lockwood, A. (2003). Predictors of success in the era of the boundaryless career. *Journal of Organizational Behavior*, 24, 689-708.
- Eccles, J. S., Adler, T. F., Futterman, R., Goff, S. B., Kaczala, C. M., Meece, J. L., et al. (1983). Expectancies, values, and academic behaviors. In J. T. Spence (Ed.), *Achievement and achievement motivation*. San Francisco: Freeman.
- Eccles, J. S., Adler, T. F., & Meece, J. L. (1984). Sex differences in achievement: A test of alternate theories. *Journal of Personality and Social Psychology*, 46(1), 26-43.
- Eden, D. (1992). Leadership and expectations: Pygmalion effects and other self-fulfilling prophecies. *Leadership Quarterly*, 3(3), 271-305.
- Edmondson, A. (2003). Speaking up in the operating room: How team leaders promote learning in interdisciplinary action teams. *Journal of Management Studies*, 40(6), 1419-1452.

- Edwards, J. R. (1992). A cybernetic theory of stress, coping, and well-being in organizations. *Academy of Management Review*, 17, 238-274.
- Edwards, J. R. (1996). An examination of competing versions of the person-environment fit approach to stress. *Academy of Management Journal*, 39(2), 292-339.
- Edwards, J. R., & Cooper, C. L. (1990). The person-environment fit approach to stress: Recurring problems and some suggested solutions. *Journal of Organizational Behavior*, 11(4), 293-307.
- Elliot, A. J. (1999). Approach and avoidance motivation and achievement goals. *Educational Psychologist*, 34, 169-189.
- Elliot, A. J., & Church, M. A. (1997). A hierarchical model of approach and avoidance achievement motivation. *Journal of Personality and Social Psychology*, 72(1), 218-232.
- Elliot, A. J., & Sheldon, K. M. (1997). Avoidance achievement motivation: A personal goals analysis. *Journal of Personality and Social Psychology*, 73(1), 171-185.
- Elliot, A. J., Sheldon, K. M., & Church, M. A. (1997). Avoidance personal goals and subjective well-being. *Personality and Social Psychology Bulletin*, 23(9), 915-927.
- Elliot, A. J., & Trash, T. M. (2002). Approach-avoidance motivation in personality: Approach and avoidance temperaments and goals. *Journal of Personality and Social Psychology*, 82(5), 804-818.
- Emerson, R. M. (1976). Social exchange theory. *Annual Review of Sociology*, 2, 335-362.
- Emmons, R. A. (1996). Striving and feeling: Personal goals and subjective well-being. In J. Bargh & P. M. Gollwitzer (Eds.), *The psychology of action: Linking motivation and cognition to behavior* (pp. 314-337). New York: Guilford.
- Emmons, R. A., & McAdams, D. P. (1991). Personal strivings and motive dispositions: Exploring the links. *Personality and Social Psychology Bulletin*, 17(6), 648-654.

- Erdogan, B., & Bauer, T. N. (2005). Enhancing career benefits of employee proactive personality: The role of fit with jobs and organizations. *Personnel Psychology, 58*, 859-891.
- Erez, M., & Isen, A. M. (2002). The influence of positive affect on the components of expectancy motivation *Journal of Applied Psychology, 87*(6), 1055-1067.
- Evers, F., Power, B., & Mitchell, J. (2003). *Preparing for the future: Identifying advanced essential skills needs in Canada* o. Document Number)
- Fletcher, S. (2000). The role for imagery in mentoring. *Career Development International, 5*(4), 235-243.
- Fratraroli, J. (2006). Experimental disclosure and its moderators: A meta-analysis. *Psychological Bulletin, 132*(6), 823-865.
- Frazier, L. D., Hooker, K., Johnson, P. M., & Kaus, C. R. (2000). Continuity and change in possible selves in later life: A 5-year longitudinal study. *Basic and Applied Social Psychology, 22*(3), 237-243.
- Fredrickson, B. L. (1998). What good are positive emotions? *Review of General Psychology, 2*(3), 300-319.
- Freeman, M. A., Hennessy, E. V., & Marzullo, D. M. (2001). Defensive evaluation of antismoking messages among college-age smokers: The role of possible selves. *Health Psychology, 20*(6), 424-433.
- French, J. P. R. J., Caplan, R. D., & Harrison, R. V. (1982). *The mechanisms of job stress and strain*. New York: Wiley.
- Frese, M. (2005). Grand theories and mid-range theories: Cultural effects on theorizing and the attempt to understand active approaches to work. In M. A. Hitt & K. G. Smith (Eds.), *Great minds in management: The process of theory development*. New York: Oxford University Press.
- Frese, M. (2008). The word is out: We need an active performance concept for modern workplaces. *Industrial and Organizational Psychology, 1*, 67-69.
- Frese, M., & Fay, D. (2001). Personal initiative: An active performance concept for work in the 21st century. *Research in Organizational Behavior, 23*, 133-187.
- Frese, M., Fay, D., Hilburger, T., Leng, K., & Tag, A. (1997). The concept of personal initiative: Operationalization, reliability and validity in two German samples. *Journal of Occupational And Organizational Psychology, 70*, 139-161.

- Frese, M., Garst, H., & Fay, D. (2007). Making things happen: Reciprocal relationships between work characteristics and personal initiative in a four-wave longitudinal structural equation model. *Journal of Applied Psychology, 92*(4), 1084-1102.
- Frese, M., Kring, W., Soose, A., & Zempel, J. (1996). Personal initiative at work: Differences between East and West Germany. *Academy of Management Journal, 39*(1), 37-63.
- Frese, M., Teng, E., & Wijnen, C. J. D. (1999). Helping to improve suggestion systems: Predictors of making suggestions in companies. *Journal Of Organizational Behavior, 20*, 1139-1155.
- Fried, Y., & Slowik, L. H. (2004). Enriching goal-setting theory with time: An integrated approach. *Academy of Management Review, 29*(3), 404-422.
- Fugate, M., Kinicki, A. K., & Ashforth, B. E. (2004). Employability: A psychosocial construct, its dimensions, and applications. *Journal of Vocational Behavior, 65*, 14-38.
- Fuller, J. B., Marler, L. E., & Hester, K. (2006). Promoting felt responsibility for constructive change and proactive behavior: Exploring aspects of an elaborated model of work design. *Journal Of Organizational Behavior, 21*, 1089-1120.
- Gaff, J. G., Pruitt-Logan, A. S., Sims, L. B., & Denecke, D. D. (2003). *Preparing future faculty in the humanities and social sciences: A guide for change*. Washington, DC: Association of American Colleges and Universities.
- Gergen, K. J. (1965). Interaction goals and personalistic feedback as factors affecting the presentation of self. *Journal of Personality and Social Psychology, 1*, 413-424.
- Gibbons, J. L., Lynn, M., Stiles, D. A., Jerez de Berducido, E., Richter, R., Walker, K., et al. (1993). Guatemalan, Filipino, and United-States adolescents' images of women as office workers and homemakers. *Psychology of Women Quarterly, 17*, 373-388.
- Gibson, D. E. (2003). Developing the professional self-concept: Role model construals in early, middle, and late career stages. *Organization Science, 14*(5), 591-610.

- Gilbert, D. T., & Wilson, T. D. (2000). Miswanting: Some problems in the forecasting of future states. In J. P. Forgas (Ed.), *Feeling and thinking: The role of affect in social cognition* (pp. 178-197). Cambridge, UK: Cambridge University Press.
- Gilbert, R., Balatti, J., Turner, P., & Whitehouse, H. (2004). The generic skills debate in research higher degrees. *Higher Education Research and Development*, 23(3), 375-388.
- Ginsberg, A., & Abrahamson, E. (1991). Champions of change and strategic shifts: The role of internal and external change advocates. *Journal of Management Studies*, 28, 173-190.
- Givens, J., & Tjia, J. (2002). Depressed medical students' use of mental health services and barriers to do so. *Academic Medicine*, 77(9), 918-921.
- Goffman, E. (1959). *The presentation of Self in everyday life*. Garden City, NY: Doubleday.
- Gollwitzer, P. M. (1986). Striving for specific identities: The social reality of self-symbolizing. In R. F. Baumeister (Ed.), *Public self and private self* (pp. 143-159). New York: Springer.
- Gollwitzer, P. M. (1990). Action phases and mind-sets. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition: Foundations of social behavior*. New York: Guildford Press.
- Gollwitzer, P. M. (1996). The volitional benefits from planning. In P. M. Gollwitzer & J. A. Bargh (Eds.), *The psychology of action: Linking cognition and motivation to behavior* (pp. 287-312). New York: Guildford Press.
- Gollwitzer, P. M. (1999). Implementation intentions: Strong effects of simple plans. *American Psychologist*, 54(7), 493-503.
- Gollwitzer, P. M., & Bargh, J. A. (1996). *The psychology of action: Linking cognition and motivation to behavior*. New York: Guildford Press.
- Gonzales, M. H., Burgess, D. J., & Mobilio, L. J. (2001). The allure of bad plans: Implications of plan quality for progress toward possible selves and postplanning energization. *Basic and Applied Social Psychology*, 23(2), 87 - 108.
- Goodstein, L. D. (1954). Interrelationships among several measures of anxiety and hostility. *Journal of Consulting Psychology*, 18, 35-39.

- Gosling, S. D., Vazire, S., Srivastava, S., & John, O. P. (2004). Should we trust web-based studies? A comparative analysis of six preconceptions about Internet questionnaires. *American Psychologist*, *59*(2), 93-104.
- Gould, S., & Penley, L. E. (1984). Career strategies and salary progression. *Organizational Behavior and Human Performance*, *34*, 244-265.
- Graen, G. B. (1976). Role-making processes within complex organizations. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology*. Chicago: Rand McNally.
- Grant, A. M. (2008). Does intrinsic motivation fuel the prosocial fire? Motivational synergy predicting persistence, performance, and productivity. *Journal of Applied Psychology*, *93*(1), 48-58.
- Grant, A. M., & Ashford, S. J. (2008). The dynamics of proactivity at work: Lessons from feedback-seeking and organizational citizenship behavior research. *Research in Organizational Behavior*, *28*, 3-34.
- Grant, A. M., Parker, S. K., & Collins, C. G. (2009). Getting credit for proactive behavior: Supervisor reactions depend on what you value and how you feel. *Personnel Psychology*, *62*(1), 31-55.
- Grant, A. M., & Sumanth, J. J. (in press). Mission possible? The performance of prosocially motivated employees depends on manager trustworthiness. *Journal of Applied Psychology*.
- Gray, J. A. (1970). The psychophysiological basis of introversion-extroversion. *Behavior Research and Therapy*, *8*, 249-266.
- Gregory, W. L., Cialdini, R. B., & Carpenter, K. M. (1982). Self-relevant scenarios as mediators of likelihood estimates and compliance: Does imagining make it so? *Journal of Personality and Social Psychology*, *43*(1), 89-99.
- Griffin, M. A., Neal, A., & Parker, S. K. (2007). A new model of work role performance: Positive behavior in uncertain and interdependent contexts. *Academy of Management Journal*, *50*(2), 327 - 347.
- Griffin, M. A., Parker, S. K., & Mason, C. M. (in press). Leader vision and the development of adaptive and proactive performance: A longitudinal study. *Journal of Applied Psychology*.
- Griffin, R. W., & Lopez, Y. P. (2005). "Bad behavior" in organizations: A review and typology for future research. *Journal of Management*, *31*(6), 988-1005.

- Grotevant, H. D. (1987). Toward a process model of identity formation. *Journal of Adolescent Research*, 2(3), 203-222.
- Gruman, J. A., Saks, A. M., & Zweig, D. I. (2006). Organizational socialization tactics and newcomer proactive behaviors: An integrative study. *Journal of Vocational Behavior*, 69, 90-104.
- Habermas, J. (1972). *Knowledge and human interest*. London: Heinemann.
- Hacker, W. (1998). *Allgemeine Arbeitspsychologie*. Bern: Huber.
- Hacker, W. (2003). Action regulation theory: A practical tool for the design of modern work processes? *European Journal of Work and Organizational Psychology*, 12(2), 105-130.
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis*. Englewood Cliffs, NJ: Prentice-Hall.
- Hall, D. T. (1991). An overview of current career development theory, research, and practice. In D. T. Hall (Ed.), *Career development in organizations*. San Francisco, CA: Jossey Bass.
- Hall, D. T., & Mirvis, P. H. (1995). The new career contract: Developing the whole person at midlife and beyond. *Journal of Vocational Behavior*, 47, 269-289.
- Hambrick, D. C. (1982). Environmental scanning and organizational strategy. *Strategic Management Journal*, 3(2), 159-174.
- Harackiewicz, J. M., Manderlink, G., & Sansone, C. (1984). Rewarding pinball Wizardy: effects of evaluation and cue value on intrinsic interest. *Journal of Personality and Social Psychology*, 47(2), 287-300.
- Harter, S. (1981). A new self-report scale of intrinsic versus extrinsic orientation in the classroom: Motivational and informational components. *Developmental Psychology*, 17, 300-312.
- Havighurst, R. T. (1956). Research on the developmental-task concept. *The School Review*, 64(5), 215-223.
- Hayes-Roth, B., & Hayes-Roth, F. (1979). A cognitive model of planning. *Cognitive Science*, 3, 275-310.
- Hayes, A. F., & Krippendorff, K. (2007). Answering the call for a standard reliability measure for coding data. *Communication Methods and Measures*, 1(1), 77-89.

- Hebb, D. O. (1955). Drives and the C.N.S. (Conceptual nervous system). *Psychological Review*, 62(4), 243-254.
- Heckhausen, H. (1991). *Motivation and action*. New York: Springer.
- Heppen, J. B., & Ogilvie, D. M. (2003). Predicting affect from global self-discrepancies: The dual role of the undesired self. *Journal of Social and Clinical Psychology*, 22, 347-368.
- Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review*, 94, 319-340.
- Higgins, E. T. (1989). Self-discrepancy theory: What patterns of self-belief cause people to suffer? In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 22, pp. 93-136). New York: Academic Press.
- Higgins, E. T. (1998). Promotion and prevention: Regulatory focus as a motivational principle. *Advances in Experimental Social Psychology*, 30, 1-47.
- Higgins, E. T., King, G. A., & Mavin, G. H. (1982). Individual construct accessibility and subjective impressions and recall. *Journal of Personality and Social Psychology*, 43, 35-47.
- Higgins, E. T., Roney, C. J., Crowe, E., & Hymes, C. (1994). Ideal versus ought predilections for approach and avoidance: Distinct self-regulatory systems. *Journal of personality and social psychology*, 66, 276-286.
- Higgins, E. T., Shah, J., & Friedman, R. (1997). Emotional responses to goal attainment: Strength of regulatory focus as moderator. *Journal of Personality and Social Psychology*, 72, 515-525.
- Higher Education Statistics Agency. (2002-2003). *Students in Higher Education Institutions* o. Document Number)
- Hofslett Kopperud, K., & Vittersø, J. (2008). Distinctions between hedonic and eudaimonic well-being: Results from a day reconstruction study among Norwegian jobholders. *Journal of Positive Psychology*, 3(3), 174-181.
- Holdaway, E. A. (1993). Graduate studies in the UK: Some impressions and suggestions. *Higher Education Quarterly*, 47(3), 237-258.
- Holland, J. L. (1985). *Making vocational choices*. Englewood Cliffs, NJ: Prentice-Hall.

- Hollenbeck, J. R., & Brief, A. P. (1987). The effects of individual differences and goal origin on goal setting and performance. *Organizational Behavior and Human Decision Processes*, 40(3), 392-414.
- Homans, C. G. (1958). Social behavior as exchange. *American Journal of Sociology*, 63, 597-606.
- Hooker, K. (1992). Possible selves and perceived health in older adults and college students. *Journals of Gerontology*, 47(1), 85-95.
- Hooker, K., Fiese, B. H., Jenkins, L., Morfei, M. Z., & Schwagler, J. (1996). Possible selves among parents of infants and preschoolers. *Developmental Psychology*, 32(2), 542-550.
- Howell, J. M., & Boies, K. (2004). Champions of technological innovation: The influence of contextual knowledge, role orientation, idea generation, and idea promotion on champion emergence. *Leadership Quarterly*, 15, 123-143.
- Howell, J. M., & Higgins, C. A. (1990a). Champions of change: Identifying, understanding, and supporting champions of technological innovations. *Organization Dynamics*, 19(1), 40-55.
- Howell, J. M., & Higgins, C. A. (1990b). Champions of technological innovation. *Administrative Science Quarterly*, 35(2), 317-341.
- Howell, J. M., & Shamir, B. (2005). The role of followers in the charismatic leadership process: Relationships and their consequences. *Academy Of Management Review*, 30(1), 96-112.
- Howell, J. M., & Shea, C. M. (2001). Individual differences, environmental scanning, innovation framing, and champion behavior: Key predictors of project performance. *Journal of Product Innovation Management*, 18(1), 15-27.
- Hoyle, R. H., & Sherrill, M. R. (2006). Future orientation in the self-system: Possible selves, self-regulation, and behavior. *Journal of Personality*, 74(6), 1673 - 1696.
- Hsee, C. K., & Abelson, P. P. (1991). Velocity relation: Satisfaction as a function of the first derivative of outcome over time. *Journal of Personality and Social Psychology*, 60, 341-347.

- Hyatt, D. E., & Ruddy, T. M. (1997). An examination of the relationship between work group characteristics and performance: Once more into the breach. *Personnel Psychology, 50*(3), 553-585.
- Hyun, J., Quinn, B., Madon, T., & Lustig, S. (2006). Graduate student mental health: Needs assessment and utilization of counseling services. *Journal of College Student Development, 47*(3), 247-266.
- Hyun, J., Quinn, B., Madon, T., & Lustig, S. (2007). Mental health need, awareness, and use of counseling services among international graduate students. *Journal of American College Health, 52*(2), 109-118.
- Ibarra, H. (1999). Provisional selves: Experimenting with image and identity in professional adaptation. *Administrative Science Quarterly, 44*, 764 - 791.
- Ibarra, H. (2007). *The power of possible selves*. Paper presented at the Academy of Management Annual Meeting.
- Idson, L. C., Liberman, N., & Higgins, E. T. (2000). Distinguishing gains from nonlosses and losses from nongains: A regulatory focus perspective on hedonic intensity. *Journal of Experimental Social Psychology, 36*, 252-274.
- Ilies, R., & Judge, T. A. (2005). Goal regulation across time: The effects of feedback and affect. *Journal of Applied Psychology, 90*(3), 453-467.
- Isen, A. M., Shalcker, T. E., Clark, M., & Karp, L. (1978). Affect, accessibility of material in memory, and behavior: A cognitive loop? *Journal of Personality and Social Psychology, 36*, 1-12.
- Jackson, C. (1996). Managing and developing a boundaryless career: Lessons from dance and drama. *European Journal of Work and Organizational Psychology, 5*(4), 617-628.
- James, W. (1890). *The principles of psychology* (Vol. 2). New York: Holt.
- Johnson, M. K., & Sherman, S. J. (1990). Constructing and reconstructing the past and the future in the present. In E. T. Higgins & R. M. Sorrentino (Eds.), *Handbook of motivation and social cognition: Foundations of social behavior* (Vol. 2, pp. 482-526). New York: Guilford.
- Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology, 89*(5), 755-768.

- Kammeyer-Mueller, J. D., & Wanberg, C. R. (2003). Unwrapping the organizational entry process: Disentangling multiple antecedents and their pathways to adjustment. *Journal of Applied Psychology, 88*(5), 779-794.
- Kanfer, R., Wanberg, C. R., & Kantrowitz, T. M. (2001). Job search and employment: A personality-motivational analysis and meta-analytic review. *Journal of Applied Psychology, 86*(5), 837-855.
- Kao, G. (2000). Group images and possible selves among adolescents: Linking stereotypes to expectations by race and ethnicity. *Sociological Forum, 15*(3), 407-430.
- Kaplowitz, M. D., Hadlock, T. D., & Levine, R. (2004). A comparison of web and mail survey response rates. *Public Opinion Quarterly, 68*(1), 94-101.
- Kark, R., & Shamir, B. (2002). The dual effect of transformational leadership: Priming relational and collective selves and further effects on followers. In B. J. Avolio & F. J. Yammarino (Eds.), *Transformational and charismatic leadership: The road ahead* (pp. 67-91). Oxford: Elsevier Science.
- Kark, R., Shamir, B., & Chen, G. (2003). The two faces of transformational leadership: Empowerment and dependency. *Journal of Applied Psychology, 88*(2), 246-255.
- Keller, R. T. (1997). Job involvement and organizational commitment as longitudinal predictors of job performance: A study of scientists and engineers. *Journal of Applied Psychology, 82*(4), 539-545.
- Kemmelmeier, M., & Oyserman, D. (2001). Gendered influence of downward social comparisons on current and possible selves. *Journal of Social Issues, 57*(1), 129 - 148.
- Kerpelman, J. L., & Lamke, L. K. (1997). Anticipation of future identities: A control theory approach to identity development within the context of serious dating relationships. *Personal Relationships, 4*, 47-62.
- Kerpelman, J. L., & Pittman, J. F. (2001). The instability of possible selves: Identity processes within late adolescents' close peer relationships. *Journal of Adolescence, 24*, 491-512.
- Kerpelman, J. L., Shoeffner, M. F., & Ross-Griffin, S. (2002). African American mothers' and daughters' beliefs about possible selves and their strategies for

- reaching the adolescents' future academic and career goals. *Journal of Youth and Adolescence*, 31(4), 289-302.
- Kiesler, S., & Sproull, L. S. (1986). Response effects in the electronic survey. *Public Opinion Quarterly*, 50, 402-413.
- Kim, T.-Y., Cable, D. M., & Kim, S.-P. (2005). Socialization tactics, employee proactivity, and Person-Organization fit. *Journal of Applied Psychology*, 90(2), 232-241.
- Kim, T.-Y., & Wang, J. (2008). Proactive personality and newcomer feedback seeking: The moderating roles of supervisor feedback and organizational justice. In M. A. Rahim (Ed.), *Current Topics in Management* (Vol. 13, pp. 91-108). London: Transaction Publishers.
- King, L. A. (2001). The health benefits of writing about life goals. *Personality and Social Psychology Bulletin*, 27(7), 798-807.
- King, L. A., & Hicks, J. A. (2004). Narrating the self in the past and the future: Implications for maturity. *Research in Human Development*, 3(2 & 3), 121-138.
- King, L. A., & Hicks, J. A. (2007). Lost and found possible selves: Goals, development, and well-being. *New Directions for Adult and Continuing Education*, 114, 27-37.
- King, L. A., Hicks, J. A., Krull, J. L., & Del Gaiso, A. K. (2006). Positive affect and the experience of meaning in life. *Journal of Personality and Social Psychology*, 90(1), 176-196.
- King, L. A., & Raspin, C. (2004). Lost and found possible selves, subjective well-being, and ego development in divorced women. *Journal of Personality*, 72(3), 603-632.
- King, L. A., Richards, J. H., & Stemmerich, E. (1998). Daily goals, life goals, and worst fears: Means, ends, and subjective well-being. *Journal of Personality*, 66(5), 713-744.
- King, L. A., & Smith, N. G. (2004). Gay and straight possible selves: Goals, identity, subjective well-being, and personality development. *Journal of Personality*, 72(5), 967 - 994.
- King, Z. (2004). Career self-management: Its nature, causes and consequences. *Journal of Vocational Behavior*, 65(1), 112-133.

- Kinicki, A. K., & Latack, J. C. (1990). Explication of the construct of coping with job loss. *Journal Of Vocational Behavior*, 36, 336-360.
- Kirkman, B. L., & Rosen, B. (1999). Beyond self-management: Antecedents and consequences of team empowerment. *Academy of Management Journal*, 42, 58-74.
- Knox, M., Funk, J., Elliott, R., & Bush, E. G. (1998). Adolescents' possible selves and their relationship to global self-esteem. *Sex Roles*, 39(1/2), 61-80.
- Kobasa, S. C., Maddi, S. R., & Kahn, S. (1982). Hardiness and health: A prospective study. *Journal of Personality and Social Psychology*, 42, 168-177.
- Koehler, D. J. (1991). Explanation, imagination, and confidence in judgment. *Psychological Bulletin*, 110(3), 499-519.
- Koop, S., De Reu, T., & Frese, M. (2000). Sociodemographic factors, entrepreneurial orientation, personal initiative and environmental problems in Uganda. In M. Frese (Ed.), *Success and failure of microbusiness owners in Africa: A psychological approach* (pp. 55-76). Westport, CT: Greenwood Publications.
- Kossek, E. E., Roberts, K., Fisher, S., & DeMarr, B. (1998). Career self-management: A quasi-experimental assessment of the effects of a training intervention. *Personnel Psychology*, 51(4), 935-962.
- Kosslyn, S. M. (1987). Seeing and imagining in the cerebral hemispheres: A computational approach. *Psychological Review*, 94(2), 148-175.
- Kraut, A. I. (1996). Introduction and overview of organizational surveys. In A. I. Kraut (Ed.), *Organizational surveys: Tools for assessment and change* (pp. 101-110). San Francisco, CA: Jossey-Bass.
- Krieshok, T. S., Hastings, S., Ebberwein, C., Wettersten, K., & Owen, A. (1999). Telling a good story: Using narratives in vocational rehabilitation with veterans. *Career Development Quarterly*, 47(3), 204-214.
- Krippendorff, K. (1970). Estimating the reliability, systematic error and random error of interval data. *Educational and Psychological Measurement*, 30, 61-70.
- Krippendorff, K. (2004). *Content Analysis: An introduction to its methodology* (2nd ed.). Beverly Hills, CA: Sage.
- Krosnick, J. A. (1999). Survey research. *Annual Review of Psychology*, 50, 537-567.
- Kuhl, J. (1986). Motivation and information processing: A new look at decision making, dynamic change, and action control. In R. M. Sorrentino & E. T.

- Higgins (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (pp. 404-434). New York: Guilford Press.
- Latack, J. C. (1986). Coping with job stress: Measures and future directions for scale development. *Journal of Applied Psychology, 71*(3), 377-385.
- Latack, J. C., & Dozier, J. B. (1986). After the ax falls: Job loss as a career transition. *Academy Of Management Review, 11*(2), 375-392.
- Lavalee, L. F., & Campbell, J. D. (1995). Impact of personal goals on self-regulation processes elicited by daily negative events. *Journal of Personality and Social Psychology, 69*, 341-352.
- Lavrakas, P. C. (1996). To err is human. *Marketing Research, 8*, 30-36.
- Leary, M. R. (2007). Motivational and emotional aspects of the self. *Annual Review of Psychology, 58*, 317-344.
- Leary, M. R., & Baumeister, R. F. (2000). The nature and function of self-esteem: Sociometer theory. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology* (Vol. 32, pp. 1-62). San Diego, CA: Academic Press.
- Lee, S. J., & Oyserman, D. (2007). Reaching for the future: The education-focused possible selves of low-income mothers. *New Directions for Adult and Continuing Education, 114*, 39-49.
- Leonardi, A., Syngollitou, E., & Kiosseoglou, G. (1998). Academic achievement, motivation and future selves. *Educational Studies, 24*(2), 153-163.
- Leondari, A. (2007). Future time perspective, possible selves, and academic achievement. *New Directions for Adult and Continuing Education, 114*(17-26).
- Leondari, A., Syngollitou, E., & Kiosseoglou, G. (1998). Academic achievement, motivation, and future selves. *Educational Studies, 24*(2), 153-163.
- LePine, J. A., & Van Dyne, L. (1998). Predicting voice behavior in work groups. *Journal of Applied Psychology, 83*(6), 853-868.
- LePine, J. A., & Van Dyne, L. (2001). Voice and cooperative behavior as contrasting forms of contextual performance: Evidence of differential relationships with the big five personality characteristics and cognitive ability. *Journal of Applied Psychology, 86*(2), 326-336.

- Lepper, M. R., & Greene, D. (1975). Turning play into work: Effects of adult surveillance and extrinsic rewards on children's intrinsic motivation. *Journal of Personality and Social Psychology*, 31(3), 479-486.
- Levenson, H. (1974). Activism and powerful others: Distinctions within the concept of internal-external control. *Journal of Personality Assessment*, 38, 377-383.
- Levin, I. M. (2000). Vision revisited: Telling the story of the future. *Journal of Applied Behavioral Science*, 36(1), 91-107.
- Levinson, D. J., Darrow, C. M., Klein, E. B., Levinson, M. H., & McKee, B. (1976). Periods in the adult development of men: Ages 18 to 45. *The Counseling Psychologist*, 6(1), 21-25.
- Lewin, K. (1951). *Field theory in social science*. New York: Harper.
- Lewin, K., Dembo, T., Festinger, L., & Sears, P. (1944). Level of aspiration. In H. J. M (Ed.), *Personality and the behavior disorders*. Oxford: Ronald Press.
- Lieberman, N., Idson, L. C., Camacho, C. J., & Higgins, E. T. (1999). Promotion and prevention choices between stability and change. *Journal of Personality and Social Psychology*, 77(6), 1135-1145.
- Lieberman, N., Molden, D. C., Idson, L. C., & Higgins, E. T. (2001). Promotion and prevention focus on alternative hypotheses: Implications for attributional functions. *Journal of Personality and Social Psychology*, 80(1), 5-18.
- Linville, P. (1985). Self-complexity and affective extremity: Don't put all your eggs into one cognitive basket. *Social Cognition*, 3(1), 94-120.
- Linville, P. (1987). Self-complexity as a cognitive buffer against stress-related illness and depression. *Journal of Personality and Social Psychology*, 52(4), 663-676.
- Lips, H. M. (2000). College students' visions of power and possibility as moderated by gender. *Psychology of Women Quarterly*, 24, 39-43.
- Lips, H. M. (2007). Gender and possible selves. *New Directions for Adult and Continuing Education*, 114, 51-59.
- Little, B. R. (1983). Personal projects: A rationale and method for investigation. *Environment and Behavior*, 15, 273-309.
- Little, B. R. (1989). Personal projects analysis: Trivial pursuits, magnificent obsessions, and the search for coherence. In D. M. Buss & N. Cantor (Eds.),

- Personality psychology: Recent trends and emerging directions*. New York: Springer.
- Locke, E. A. (1991). Goal theory versus control theory: Contrasting approaches to understanding work motivation. *Motivation and Emotion*, 15(1), 9-28.
- Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice-Hall.
- Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist*, 57(9), 705-717.
- Locke, E. A., Shaw, K. N., Saari, L. M., & Latham, G. P. (1981). Goal Setting and Task Performance: 1969-1980. *Psychological Bulletin*, 90, 125-152.
- Loewenstein, G., & Prelec, D. (1992). Anomalies in intertemporal choice: Evidence and an interpretation. In G. Loewenstein & J. Elster (Eds.), *Choice over time*. New York: Russell Sage Foundation.
- Lombard, M., Snyder-Duch, J., & Campanella Bracken, C. (2002). Content analysis in mass communication: Assessment and reporting of intercoder reliability. *Human Communication Research*, 28(4), 587-604.
- Lombard, M., Snyder-Duch, J., & Campanella Bracken, C. (2003). Correction. *Human Communication Research*, 29(3), 469-472.
- London, M., Larsen, H. H., & Thisted, L. N. (1999). Relationships between feedback and self-development. *Group and Organization Management*, 24(1), 5-27.
- Lord, R. G., Brown, D. J., & Freiberg, S. J. (1999). Understanding the dynamics of leadership: The role of follower self-concepts in the leader follower relationship. *Organizational Behavior And Human Decision Processes*, 78(3), 167-203.
- Luthans, F., Avey, J. B., Avolio, B. J., Norman, S. M., & Combs, G. M. (2006). Psychological capital development: Toward a micro-intervention. *Journal Of Organizational Behavior*, 27, 387-393.
- Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological capital: Measurement and relationship with performance and satisfaction. *Personnel Psychology*, 60, 541-572.
- Luthans, F., & Youssef, C. M. (2007). Emerging positive organizational behavior. *Journal of Management*, 33(3), 321-349.

- Lyubomirsky, S., Sousa, L., & Dickerhoof, R. (2006). The costs and benefits of thinking, writing, and talking about life's triumphs and defeats. *Journal of Personality and Social Psychology, 90*(4), 692-708.
- Marcia, J. E. (1966). Development and validation of ego identity status. *Journal of Personality and Social Psychology, 3*(5), 551-558.
- Marko, K. W., & Savickas, M. L. (1998). Effectiveness of a career timing perspective intervention. *Journal of Vocational Behavior, 52*, 106-119.
- Markus, H. R., & Nurius, P. (1986). Possible Selves. *American Psychologist, 41*(9), 954-969.
- Markus, H. R., & Ruvolo, A. P. (1989). Possible selves: Personalized representations of goals. In L. A. Pervin (Ed.), *Goal concepts in personality and social psychology* (pp. 211-241). Hillsdale, NJ: Erlbaum.
- Markus, H. R., & Wurf, E. (1987). The dynamic self-concept: A social psychological perspective. *Annual Review of Psychology, 38*, 299-337.
- McAdams, D. P. (1996). Personality, modernity, and the storied self: A contemporary framework for studying persons. *Psychological Inquiry, 7*(4), 295-321.
- McAdams, D. P. (2001). The psychology of life stories. *Review of General Psychology, 5*(2), 100-122.
- McAlpine, L., & Norton, J. (2006). Reframing our approach to doctoral programs: An integrative framework for action and research. *Higher Education Research and Development, 25*(1), 3-17.
- McArdle, S., Waters, L., Briscoe, J. P., & Hall, D. T. (2007). Employability during unemployment: Adaptability, career identity and human and social capital. *Journal of Vocational Behavior, 71*, 247-264.
- McClelland, D. C. (1979). Inhibited power motivation and high blood pressure in men. *Journal of Abnormal Psychology, 88*, 182-190.
- McClelland, D. C. (1985). *Human motivation*. Glenview, IL: Scott, Foresman.
- Meara, N. M., Day, J. D., Chalk, L. M., & Phelps, R. E. (1995). Possible selves: Applications for career counseling. *Journal of Career Assessment, 3*(3), 259-277.

- Mehta, R., & Sivadas, E. (1995). Comparing response rates and response content in mail versus electronic mail surveys. *Journal of the Market Research Society*, 37, 429-439.
- Menard, S. W. (1995). *Applied logistic regression analysis (Quantitative applications in the social sciences)*. Thousand Oaks, CA: Sage Publications.
- Menguc, B., Han, S.-L., & Auh, S. (2007). A test of a model of new salespeople's socialization and adjustment in a collectivist culture. *Journal of Personal Selling and Sales Management* 27(2), 149-167.
- Metcalf, J., & Gray, A. (2005). *Employability and doctoral research postgraduates*. London: The Higher Education Academy.
- Meuus, W. (1996). Studies on identity development in adolescence: An overview of research and some new data. *Journal of Youth and Adolescence*, 25(5), 569-598.
- Meuus, W., Iedema, J., Helsen, M., & Vollebergh, W. (1999). Patterns of adolescent identity development: A review of literature and longitudinal analysis. *Developmental Review*, 19(4), 419-461.
- Meyer, J. P., Becker, T. E., & Van Dick, R. (2006). Social identities and commitments at work: Towards an integrative model. *Journal of Organizational Behavior*, 27(5), 665-683.
- Miller, G. A., Galanter, E. H., & Pribram, K. H. (1960). *Plans and the structure of behavior*. New York: Holt, Rinehart & Winston.
- Miller, R. B., & Brickman, S. J. (2004). A model of future-oriented motivation and self-regulation. *Educational Psychology Review*, 16(1), 9 - 33.
- Miller, V. D., & Jablin, F. M. (1991). Information seeking during organizational entry: Influences, tactics, and a model of the process. *Academy Of Management Review*, 16(1), 92-120.
- Millward, L. J. (1995). Contextualizing social identity in consideration of what it means to be a nurse. *European Journal of Social Psychology*, 25, 303-324.
- Mirvis, P. H., & Hall, D. T. (1994). Psychological success and the boundaryless career. *Journal of Organizational Behavior*, 15(4), 365-380.
- Mischel, W. (1973). Toward a cognitive social learning reconceptualization of personality. *Psychological Review*, 80(4), 200-213.

- Monat, A., Averill, J. R., & Lazarus, R. S. (1972). Anticipatory stress and coping reactions under various conditions of uncertainty. *Journal of Personality and Social Psychology*, 24(2), 237-253.
- Morrison, E. W. (1993a). Longitudinal study of the effects of information seeking on newcomer socialization. *Journal of Applied Psychology*, 78(2), 173-183.
- Morrison, E. W. (1993b). Newcomer information seeking: Exploring types, modes, sources, and outcomes. *Academy of Management Journal*, 36(3), 557-589.
- Morrison, E. W. (2002). Newcomers' relationships: The role of social network ties during socialization. *Academy of Management Journal*, 45(6), 1149-1160.
- Morrison, E. W. (2006). Doing the job well: An investigation of pro-social rule breaking. *Journal of Management*, 32(1), 5-28.
- Morrison, E. W., & Bies, R. J. (1991). Impression management in the feedback-seeking process: A literature review and research agenda. *Academy Of Management Review*, 16(3), 522-541.
- Morrison, E. W., & Phelps, C. C. (1999). Taking charge at work: Extrarole efforts to initiate workplace change. *Academy of Management Journal*, 42(4), 403-419.
- Moscovitch, M., Rosenbaum, S. R., Gilboa, A., Addis, D. R., Westmacott, R., Grady, C., et al. (2005). Functional neuroanatomy of remote episodic, semantic and spatial memory: A unified account based on multiple trace theory. *Journal of Anatomy*, 207(1), 35-66.
- Mumford, M. D., & Gustafson, S. B. (1988). Creativity syndrome: Integration, application, and innovation. *Psychological Bulletin*, 103(1), 27-43.
- Murray, H. A. (1938). *Explorations in personality*. New York: Oxford University Press.
- Near, J. P., & Miceli, M. P. (1985). Organization dissidence: The case of whistle-blowing. *Journal of Business Ethics*, 4, 1-16.
- Near, J. P., & Miceli, M. P. (1995). Effective whistle-blowing. *Academy Of Management Review*, 20(3), 679-708.
- Near, J. P., & Miceli, M. P. (1996). Whistle-blowing: Myth and reality. *Journal of Management*, 22(3), 507-526.
- Nelson, N. G., Dell'Oliver, C., Koch, C., & Buckler, R. (2001). Stress, coping, and success among graduate students in clinical psychology. *Psychological Reports*, 88(3), 759-767.

- Neyman, J., & Pearson, E. S. (1933). On the problem of the most efficient tests of statistical hypotheses. *Philosophical Transactions of the Royal Society*, A(231), 289-337.
- Nezlek, J. B., & Plesko, R. M. (2001). Day-to-day relationships among self-concept clarity, self-esteem, daily events, and mood. *Personality and Social Psychology Bulletin*, 27(2), 201-211.
- Nicholls, J. G. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. *Psychological Review*, 91(3), 328-346.
- Nicholson, N. (1984). A theory of work role transitions. *Administrative Science Quarterly*, 29(2), 172-191.
- Niedenthal, P. M., Setterlund, M. B., & Wherry, M. B. (1992). Possible self-complexity and affective reactions to goal-relevant behavior. *Journal of Personality and Social Psychology*, 63(1), 5-16.
- Norman, C. C., & Aron, A. (2003). Aspects of possible self that predict motivation to achieve or avoid it. *Journal of Experimental Social Psychology*, 39, 500-507.
- Nuttin, J. (1985). *Future time perspective and motivation: Theory and research method*. Hillsdale, NJ: Erlbaum.
- Obodaru, O. (2008). *The selves we could have been: Introducing the construct of alternative professional identity*. Paper presented at the Positive Organizational Scholarship Conference 2008.
- Oettingen, G. (1999). Free fantasies about the future and the emergence of developmental goals. In J. Brandstädter & R. M. Lerner (Eds.), *Action and self-development: Theory and research through the life span* (pp. 315-342). Thousand Oaks: Sage.
- Oettingen, G., Pak, H.-j., & Schnetter, K. (2001). Self-regulation of goal-setting: Turning free fantasies about the future into binding goals. *Journal of Personality and Social Psychology*, 80(5), 736-753.
- Ogilvie, D. M. (1987). The undesired self: A neglected variable in personality research. *Journal of Personality and Social Psychology*, 52(2), 379-385.
- Ogilvie, D. M., & Lutz, M. (1984). The representation of multiple identities.

- Ohly, S., & Fritz, C. (2007). Challenging the status quo: What motivates proactive behavior? *Journal Of Occupational And Organizational Psychology*, 80, 623-629.
- Oppermann, M. (1995). E-mail surveys: Potential and pitfalls. *Marketing Research: A Magazine of Management & Application*, 7, 29-33.
- Oyserman, D. (2004). Self-concept and identity. In N. Brewer & M. Hewstone (Eds.), *Self and social identity* (pp. 5-23). Oxford: Blackwell Publishing.
- Oyserman, D., Bybee, D., & Terry, K. (2006). Possible selves and academic outcomes: How and when possible selves impel action. *Journal of Personality and Social Psychology*, 91(1), 188 - 204.
- Oyserman, D., Bybee, D., Terry, K., & Hart-Johnson, T. (2004). Possible selves as roadmaps. *Journal of Research in Personality*, 38, 130-149.
- Oyserman, D., & Fryberg, S. A. (2006). The possible selves of diverse adolescents: Content and function across gender, race, and national origin. In C. Dunkel & J. Kerpelman (Eds.), *Possible selves: Theory, research and application*. Huntington, NY: Nova.
- Oyserman, D., Gant, L., & Ager, J. (1995). A socially contextualized model of African American identity: School persistence and possible selves. *Journal of Personality and Social Psychology*, 69(6), 1216-1232.
- Oyserman, D., & Markus, H. R. (1990). Possible selves and delinquency. *Journal of Personality and Social Psychology*, 59(1), 112 - 125.
- Oyserman, D., & Saltz, E. (1993). Competence, delinquency, and attempts to attain possible selves. *Journal of Personality and Social Psychology*, 65(2), 360 - 374.
- Oyserman, D., Terry, K., & Bybee, D. (2002). Possible selves intervention to enhance school involvement. *Journal of Adolescence*, 25, 313 - 326.
- Packard, B. W.-L., & Conway, P. F. (2006). Methodological choice and its consequences for possible selves research. *Identity*, 6(3), 251-271.
- Packard, B. W.-L., & Nguyen, D. (2003). Science career-related possible selves of adolescent girls: A longitudinal study. *Journal of Career Development*, 29(4), 251-263.
- Page, D. (1998). Predicting the job performance of scientists and engineers. *Academy of Management Executive*, 12(2), 98-99.

- Parker, S. K. (1998). Enhancing role breadth self-efficacy: The roles of job enrichment and other organizational interventions. *Journal of Applied Psychology*, 83(6), 835-852.
- Parker, S. K. (2000). From passive to proactive motivation: The importance of flexible role orientations and role breadth self-efficacy. *Applied Psychology: An International Review*, 49(3), 447-469.
- Parker, S. K. (2007a). *How positive affect can facilitate proactive behavior in the work place*. Paper presented at the Academy of Management Annual Meeting.
- Parker, S. K. (2007b). "That is my job": How employees' role orientation affects their job performance. *Human Relations*, 60(3), 403-434.
- Parker, S. K., Bindl, U., & Strauss, K. (forthcoming). Proactivity in the workplace: Advances, synthesis and future directions. *Journal of Management*.
- Parker, S. K., & Collins, C. G. (2009). Taking stock of proactivity: Integrating and differentiating multiple forms of proactive behavior. *Journal of Management*.
- Parker, S. K., & Ohly, S. (in press). Designing motivating jobs. In R. Kanfer, G. Chen & R. Pritchard (Eds.), *Work motivation: Past, present, and future*.
- Parker, S. K., Wall, T. D., & Jackson, P. R. (1997). "That's not my job": Developing flexible employee work orientations. *Academy of Management Journal*, 40(4), 899-929.
- Parker, S. K., Williams, H. M., & Turner, N. (2006). Modeling the antecedents of proactive behavior at work. *Journal of Applied Psychology*, 91(3), 636-652.
- Pearce, J. L., & Porter, L. W. (1986). Employee responses to formal performance appraisal feedback. *Journal of Applied Psychology*, 71(2), 211-218.
- Pearce, K. A., Terry, D. J., & Tharenou, P. (1994). *Person-centered and situational variables as predictors of women's aspirations to manage* Unpublished manuscript.
- Pelham, B. W. (1991). On confidence and consequence: The certainty and importance of self-knowledge. *Journal of Personality and Social Psychology*, 60, 518-530.
- Pelham, B. W., & Swann, W. B. (1989). From self-conceptions to self-worth: On the sources and structure of global self-esteem. *Journal of Personality and Social Psychology*(672-680).

- Penland, E. A., Masten, W. G., Zelhart, P., Fournet, G. P., & Callahan, T. (2000). Possible selves, depression and coping skills in university students. *Personality and Individual Differences, 29*, 963-969.
- Penley, L., & Gould, S. (1981). Measuring career strategies: The psychometric characteristics of the career strategies inventory. Center for Studies in Business, Economics and Human Resources, University of Texas.
- Pennebaker, J. W. (1998). Conflict and canned meat. *Psychological Inquiry, 9*, 219-220.
- Pennington, G. L., & Roese, N. J. (2003). Regulatory focus and temporal distance. *Journal of Experimental Social Psychology, 39*, 563-576.
- Pervin, L. A. (1983). The stasis and flow of behavior: Toward a theory of goals. In M. M. Page (Ed.), *Personality - Current theory and research: 1982 Nebraska symposium on motivation*. Lincoln: University of Nebraska Press.
- Pervin, L. A. (1989). *Goal concepts in personality and social psychology*. Hillsdale, NJ: Lawrence Erlbaum.
- Pfeffer, J., & Baron, N. (1988). Taking the work back out: Recent trends in the structures of employment. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (Vol. 10, pp. 257-303).
- Pham, L. B., & Taylor, S. E. (1999). From thought to action: Effects of process- versus outcome-based mental simulations on performance. *Personality and Social Psychology Bulletin, 25*(2), 250-260.
- Phillips, A. G., Silvia, P. J., & Paradise, M. J. (2007). The undesired self and emotional experience: A latent variable approach. *Journal of Social and Clinical Psychology, 26*(9), 1035-1047.
- Pizzolato, J. E. (2007). Impossible selves: Investigating students' persistence decisions when their career-possible selves border on impossible. *Journal of Career Development, 33*(3), 201-233.
- Pledge, D. S., Lapan, R. T., Heppner, P. P., Kivlighan, D., & Roehlke, H. J. (1998). Stability and severity of presenting problems at a university counseling center: A 6-year analysis. *Professional Psychology: Research and Practice, 29*(4), 386-389.
- Plewis, I. (1985). *Analysing change: Measurement and explanation using longitudinal data*. Chichester: Wiley.

- Plimmer, G., & Schmidt, A. (2007). Possible selves and career transition: It's who you want to be, not what you want to do. *New Directions for Adult and Continuing Education*, 114, 61-74.
- Plimmer, G., Smith, M., Duggan, M., & Englert, P. (1999-2000). Career adaptability, well-being, and possible selves. *Career Planning and Adult Development Journal*, 15, 83-92.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903.
- Porter, S. R., & Whitcomb, M. E. (2003). The impact of lottery incentives on student survey response. *Research in Higher Education*, 44(4), 389-407.
- Quinlan, S. L., Jaccard, J., & Blanton, H. (2006). A decision theory and prototype conceptualization of possible selves: Implications for the prediction of risk behavior. *Journal of Personality*, 74(2), 599-630.
- Rafferty, A. E., & Griffin, M. A. (2006). Refining individualized consideration: Distinguishing developmental leadership and supportive leadership. *Journal of Occupational and Organizational Psychology*, 79(1), 37-61.
- Raghuram, S., Wiesenfeld, B., & Garud, R. (2003). Technology enabled work: The role of self-efficacy in determining telecommuter adjustment and structuring behavior. *Journal of Vocational Behavior*, 63, 180-198.
- Rank, J., Carsten, J. M., Unger, J. M., & Spector, P. E. (2007). Proactive customer service performance: Relationships with individual, task, and leadership variables. *Human Performance*, 20(4), 363-390.
- Rank, J., Nelson, N. E., Allen, T. D., & Xu, X. (in press). Leadership predictors of innovation and task performance: Subordinates' self-esteem and self-presentation as moderators. *Journal of Occupational and Organizational Psychology*.
- Rank, J., Pace, V. L., & Frese, M. (2004). Three avenues for future research on creativity, innovation, and initiative. *Applied Psychology: An International Review*, 53(4), 518-528.
- Raynor, J. O. (1974). Future orientation in the study of achievement motivation. In J. W. Atkinson & J. O. Raynor (Eds.), *Motivation and Achievement* (pp. 121-154). New York: Winston & Sons.

- Renn, R. W., & Fendor, D. B. (2001). Development and field test of a feedback seeking, self-efficacy, and goal setting model of work performance. *Journal of Management*, 27, 563-583.
- Rice, R. W., McFarlin, D. B., Hunt, R. G., & Near, J. P. (1985). Organizational work and the perceived quality of life: Toward a conceptual model. *Academy of Management Review*, 10, 296-310.
- Riketta, M. (2005). Organizational identification: A meta-analysis. *Journal of Vocational Behavior*, 66, 358-384.
- Riketta, M., & Van Dick, R. (2005). Foci of attachment in organizations: A meta-analytic comparison of the strength and correlates of workgroup versus organizational identification and commitment. *Journal of Vocational Behavior*, 67(3), 490-510.
- Roberson, L. (1989). Assessing personal work goals in the organizational setting: Development and evaluation of the Work Concerns Inventory. *Organizational Behavior And Human Decision Processes*, 44, 345-367.
- Roberson, L. (1990). Prediction of job satisfaction from characteristics of personal work goals. *Journal Of Organizational Behavior*, 11(1), 29-41.
- Roberts, G. (2002). *SET for success: The report of Sir Gareth Roberts' review - The supply of people with science, technology, engineering and mathematical skills*. Londono. Document Number)
- Rodin, J. (1986). Aging and health: Effects of the sense of control *Science*, 233(4770), 1271-1276.
- Rodin, J., Timko, C., & Harris, S. (1985). The construct of control: Biological and psychosocial correlates. *Annual review of gerontology and geriatrics*, 5, 3-55.
- Rogelberg, S. G., Conway, J. M., Sederburg, M. E., Spitzmueller, C., Aziz, S., & Knight, W. E. (2003). Profiling active and passive nonrespondents to an organizational survey. *Journal of Applied Psychology*, 88(6), 1104-1114.
- Rogg, K. L., Schmidt, D. B., Shull, C., & Schmitt, N. (2001). Human resource practices, organizational climate, and customer satisfaction. *Journal of Management*, 27, 431-449.
- Rokeach, M. (1973). *The nature of human values*. New York: The Free Press.
- Rossiter, M. (2007a). Possible selves in adult education. *New Directions for Adult and Continuing Education*, 114, 87-94.

- Rossiter, M. (2007b). Possible selves: An adult education perspective. *New Directions for Adult and Continuing Education*, 114, 5-15.
- Rothbaum, F., Weisz, J. R., & Snyder, S. S. (1982). Changing the world and changing the self: A two-process model of perceived control. *Journal of Personality and Social Psychology*, 42(1), 5-37.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monograph*, 80, 1 (whole No. 609).
- Ruvolo, A. P., & Markus, H. R. (1992). Possible selves and performance: The power of self-relevant imagery. *Social Cognition*, 10(1), 95-124.
- Ryan, R. M. (1982). Control and information in the intrapersonal sphere: An extension of cognitive evaluation theory. *Journal of Personality and Social Psychology*, 43(3), 450-461.
- Ryan, R. M., Connell, J. P., & Deci, E. L. (1985). A motivational analysis of self-determination and self-regulation in education. In C. Ames & R. E. Ames (Eds.), *Research on motivation in education: The classroom milieu*. New York: Academic Press.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78.
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52, 141-166.
- Rynes, S. L., Tolbert, P. S., & Strausser, P. G. (1988). Aspirations to manage: A comparison of engineering students and working engineers. *Journal of Vocational Behavior*, 32, 239-253.
- Sackett, P. R., & Yang, H. (2000). Correction for range restriction: An expanded typology. *Journal of Applied Psychology*, 85(1), 112-118.
- Saks, A. M., & Ashforth, B. E. (1996). Proactive socialization and behavioral self-management. *Journal of Vocational Behavior*, 48(3), 301-323.
- Saks, A. M., & Ashforth, B. E. (1999). Effects of individual differences and job search behaviors on the employment status of recent university graduates. *Journal Of Vocational Behavior*, 54(2), 335-349.

- Sastry, T. (2004). *Postgraduate education in the United Kingdom: Higher Education Policy Institute*. Document Number)
- Sax, L. J., Gilmartin, S. K., & Bryant, A. N. (2003). Assessing response rates and nonresponse bias in web and paper surveys. *Research in Higher Education*, 44(4), 409-432.
- Schaefer, D. R., & Dillman, D. A. (1998). Development of a standard e-mail methodology: Results of an experiment. *Public Opinion Quarterly*, 62, 378-386.
- Schein, E. H. (1978). *Career dynamics: Matching individual and organisational needs*. Reading, MA: Addison-Wesley.
- Schmidt, W. C. (1998). World-wide web survey research: Benefits, potential problems, and solutions. *Behavior Research Methods, Instruments & Computers*, 29(2), 274-279.
- Schneider, B. (1990a). The climate for service: An application of the climate construct. In B. Schneider (Ed.), *Organizational climate and culture*. San Francisco, CA: Jossey-Bass.
- Schneider, B. (1990b). *Organizational climate and culture*. San Francisco: Jossey-Bass.
- Schneider, B., & Bowen, D. E. (1985). Employee and customer perceptions of service in banks: Replication and extension. *Journal of Applied Psychology*, 70(3), 423-433.
- Schneider, B., Bowen, D. E., Ehrhart, M. E., & Holcombe, K. M. (2000). The climate for service: Evolution of a construct. In C. Ashkanasy, C. Wilderon & M. F. Peterson (Eds.), *Handbook of organizational culture and climate* (pp. 21-36). Thousand Oaks: Sage.
- Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of Management Journal*, 37(3), 580-607.
- Segal, H. G., DeMeis, D. K., Wood, G. A., & Smith, H. L. (2001). Assessing future possible selves by gender and socioeconomic status using the anticipated life history measure. *Journal of Personality*, 69(1), 57-87.
- Seibert, S. E., Crant, J. M., & Kraimer, M. L. (1999). Proactive personality and career success. *Journal of Applied Psychology*, 84(3), 416-427.

- Seibert, S. E., Kraimer, M. L., & Crant, J. M. (2001). What do proactive people do? A longitudinal model linking proactive personality and career success. *Personnel Psychology, 54*(2), 845-874.
- Shamir, B. (1991). Meaning, self and motivation in organizations. *Organization Studies, 12*(3), 405 - 424.
- Sheehan, K. B. (2006). E-mail survey response rates: A review. *Journal of Computer-Mediated Communication, 6*(2), 0-0.
- Sheldon, K. M., & Elliot, A. J. (1999). Goal striving, need satisfaction, and longitudinal well-being: The self-concordance model. *Journal of Personality and Social Psychology, 76*(3), 482-497.
- Sheldon, K. M., & Kasser, T. (1998). Pursuing personal goals: Skills enable progress, but not all progress is beneficial. *Personality and Social Psychology Review, 24*(12), 1319-1331.
- Sheldon, K. M., & Lyubomirsky, S. (2006). How to increase and sustain positive emotion: The effects of expressing gratitude and visualizing best possible selves. *Journal of Positive Psychology, 1*(2), 73-82.
- Simpson, B., & Carroll, B. (2008). Re-viewing "role" in processes of identity construction. *Organization, 15*(1), 29-50.
- Simsek, Z., & Veiga, J. F. (2000). The electronic survey technique: An integration and assessment. *Organizational Research Methods, 3*(1), 93-115.
- Simsek, Z., & Veiga, J. F. (2001). A primer on internet organizational surveys. *Organizational Research Methods, 4*(3), 218-235.
- Singer, J. A. (2004). Narrative identity and meaning making across the adult lifespan: An introduction. *Journal of Personality, 72*(3), 437-460.
- Smith, J., & Freund, A. M. (2002). The dynamics of possible selves in old age. *Journal of Gerontology, 57B*(6), 492-500.
- Snyder, C. R. (2000). *Handbook of hope: Theory, measures, and applications*. San Diego, CA: Academic Press.
- Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., et al. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology, 60*(4), 570-585.

- Snyder, C. R., Sympson, S. C., Ybasco, F. C., Borders, T. F., Babyak, M. A., & Higgins, R. L. (1996). Development and validation of the state hope scale. *Journal of Personality and Social Psychology, 70*(2), 312-335.
- Sosik, J. J. (2000). Meaning from within: Possible selves and personal meaning of charismatic and non-charismatic leaders. *Journal of Leadership and Organizational Studies, 7*(2), 3-17.
- Speier, C., & Frese, M. (1997). Generalized self-efficacy as a mediator and moderator between control and complexity at work and personal initiative: A longitudinal field study in East Germany. *Human Performance, 10*(2), 171-192.
- Sproull, L. S. (1986). Using electronic mail for data collection in organizational research. *Academy of Management Journal, 29*(159-169).
- Srivastava, S., & Beer, J. S. (2005). How self-evaluations relate to being liked by others: Integrating sociometer and attachment perspectives. *Journal of Personality and Social Psychology, 89*, 966-977.
- Srull, T. K., & Wyer, R. S., Jr. (1986). The role of chronic and temporary goals in social information processing. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (pp. 503- 549). New York: Guilford.
- Stake, J. E., & Nickens, S. D. (2005). Adolescent girls' and boys' science peer relationships and perceptions of the possible self as scientist. *Sex Roles, 52*(1/2), 1-11.
- Stanton, J. M. (1998). An empirical assessment of data collection using the Internet. *Personnel Psychology, 51*, 709-725.
- Stanton, J. M., & Rogelberg, S. G. (2001). Using internet/intranet web pages to collect organizational research data. *Organizational Research Methods, 4*(3), 200-217.
- Staw, B. M., & Boettger, R. D. (1990). Task revision: A neglected form of work performance. *Academy of Management Journal, 33*(3), 534-559.
- Steel, P., & König, C. J. (2006). Integrating theories of motivation. *Academy of Management Review, 31*(4), 889-913.

- Stein, K. F., Roeser, R., & Markus, H. R. (1998). Self-schemas and possible selves as predictors and outcomes of risky behaviors in adolescents. *Nursing Research*, 47(2), 96-106.
- Strathman, A., Gleicher, F., Boninger, D. S., & Edwards, C. S. (1994). The consideration of future consequences: Weighing immediate and distant outcomes of behavior. *Journal of Personality and Social Psychology*, 66(4), 742-752.
- Strauss, A. L. (1959). *Mirrors and masks: The search for identity*. Glencoe, IL: Free Press.
- Strauss, K., & Griffin, M. A. (2009). *Anticipation and identity: Future selves as a source of proactive goals*. Paper presented at the Academy of Management Annual Meeting.
- Strauss, K., Griffin, M. A., & Parker, S. K. (2009). *Solving the Initiative Paradox: Leader vision and the collective future self*. Paper presented at the 14th European Congress of Work and Organizational Psychology.
- Strauss, K., Griffin, M. A., & Parker, S. K. (under review). Extending career identity: Future career selves and career self-management behaviors.
- Strauss, K., Griffin, M. A., & Rafferty, A. E. (2009). Proactivity directed toward the team and organization: The role of leadership, commitment, and role-breadth self-efficacy. *British Journal of Management*.
- Strauss, R., & Goldberg, W. A. (1999). Self and possible selves during the transition to fatherhood. *Journal of Family Psychology*, 13, 244-259.
- Stryker, S. (1980). *Symbolic Interactionism*. Menlo Park, CA: Benjamin/Cummings.
- Stryker, S. (1986). Identity theory: Developments and extensions. In K. Yardley & T. Honess (Eds.), *Self and Identity* (pp. 83-103). New York: Wiley.
- Stryker, S., & Serpe, R. T. (1994). Identity salience and psychological centrality: Equivalent, overlapping, or complementary concepts? *Social Psychology Quarterly*, 57(1), 16-35.
- Suddendorf, T., & Corballis, M. C. (2007). The evolution of foresight: What is mental time travel and is it unique to humans? *Behavioral and Brain Sciences*.

- Sullivan, S. E., & Arthur, M. B. (2006). The evolution of the boundaryless career concept: Examining physical and psychological mobility. *Journal of Vocational Behavior, 69*, 19-29.
- Swann, W. B., Jr. (1987). Identity negotiation: Where two roads meet. *Journal of Personality and Social Psychology, 53*(6), 1038-1051.
- Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin, 103*, 193-210.
- Taylor, S. E., Pham, L. B., Rivkin, I. D., & Armor, D. A. (1998). Harnessing the imagination: Mental simulation, self-regulation, and coping. *American Psychologist, 53*(4), 429-439.
- Teasdale, J. D., & Fogarty, S. J. (1979). Differential effects of induced mood on retrieval of pleasant and unpleasant effects from episodic memory. *Journal of Abnormal Psychology, 88*, 248-257.
- Tellegen, A. (1985). Structures of mood and personality and their relevance to assessing anxiety, with an emphasis on self report. In A. H. Tuma & J. D. Maser (Eds.), *Anxiety and the anxiety disorders* (pp. 681-706). Hillsdale, NJ: Lawrence Erlbaum.
- Tharenou, P., & Terry, D. J. (1998). Reliability and validity of scores on scales to measure managerial aspirations. *Educational and Psychological Measurement, 58*(3), 475-492.
- Thompson, E. R. (2007). Development and validation of an internationally reliable short-form of the positive and negative affect schedule (PANAS). *Journal of Cross-Cultural Psychology, 38*, 227-242.
- Thompson, J. A. (2005). Proactive personality and job performance: A social capital perspective. *Journal of Applied Psychology, 90*(5), 1011-1017.
- Thompson, L. F., & Surface, E. A. (2007). Employee surveys administered online: Attitudes toward the medium, nonresponse, and data representativeness. *Organizational Research Methods, 10*(2), 241-261.
- Toews, J., Lockyer, J., Dobson, D., Simpson, E., Brownell, A., Brenneis, F., et al. (1997). Analysis of stress levels among medical students, residents, and graduate students at four Canadian schools of medicine. *Academic Medicine, 72*(11), 997-1002.

- Tracy, J. L., & Robins, R. W. (2004). Putting the self into self-conscious emotions: A theoretical model. *Psychological Inquiry, 15*(2), 103-125.
- Tuckey, M., Brewer, N., & Williamson, P. (2002). The influence of motives and goal orientation on feedback seeking. *Journal of Occupational and Organizational Psychology, 75*(2), 195-216.
- Tulving, E. (1985). Memory and consciousness. *Canadian Psychology, 26*(1), 1-12.
- Tulving, E. (2005). Episodic memory and autonoesis: Uniquely human? In H. S. Terrace & J. Metcalfe (Eds.), *The missing link in cognition*. New York: Oxford University Press.
- Tversky, A., & Kahneman, D. (1992). Advances in prospect theory: Cumulative representation of uncertainty. *Journal of Risk and Uncertainty, 5*, 297-323.
- Unemori, P., Omoregie, H., & Markus, H. R. (2004). Self-portraits: Possible selves in European-American, Chilean, Japanese and Japanese-American cultural contexts. *Self and Identity, 3*, 321-338.
- United Kingdom Research Councils and the Arts and Humanities Research Board. (2001). *Joint statement of the UK research councils' training requirements for research students*. Retrieved from <http://www.grad.ac.uk/downloads/documents/general/Joint%20Skills%20Statement.pdf>.
- Van den Bos, K. (2001). Uncertainty management: The influence of uncertainty salience on reactions to perceived procedural fairness. *Journal of Personality and Social Psychology, 80*(6), 931-941.
- Van Dyne, L., & LePine, J. A. (1998). Helping and voice extra-role behaviors: Evidence of construct and predictive validity. *Academy of Management Journal, 41*, 108-119.
- van Knippenberg, D., & Sleebos, E. (2006). Organizational identification versus organizational commitment: Self-definition, social exchange, and job attitudes. *Journal Of Organizational Behavior, 27*, 571-584.
- van Knippenberg, D., van Knippenberg, B., De Cremer, D., & Hogg, M. A. (2004). Leadership, self, and identity: A review and research agenda. *Leadership Quarterly, 15*(6), 825-856.

- Van Maanen, J., & Schein, E. H. (1979). Toward a theory of organizational socialization. In B. M. Staw (Ed.), *Research in organizational behavior* (Vol. 1, pp. 209-264). Greenwich, CT: JAI Press.
- VandeWalle, D. (1997). Development and validation of a work domain goal orientation instrument. *Educational and Psychological Measurement, 57*(6), 995-1015.
- VandeWalle, D., & Cummings, L. L. (1997). A test of the influence of goal orientation on the feedback-seeking process. *Journal of Applied Psychology, 82*(3), 390-400.
- Vignoles, V. L., Manzi, C., Regalia, C., Jemmo, S., & Scabini, E. (2008). Identity motives underlying desired and feared possible future selves. *Journal of Personality, 76*(5), 1165-1200.
- Vignoles, V. L., Regalia, C., Manzi, C., Gollledge, J., & Scabini, E. (2006). Beyond self-esteem : Influence of multiple motives on identity construction. *Journal of Personality and Social Psychology, 90*(2), 308-333.
- Volpert, W. (1983). Das Modell der hierarchisch-sequentiellen Handlungsregulation. In W. Hacker, W. Volpert & M. von Cranach (Eds.), *Kognitive und motivationale Aspekte der Handlung* (pp. 38-58). Bern Huber.
- Vroom, V. (1964). *Work and motivation*. New York: Wiley.
- Waid, L. D., & Frazier, L. D. (2003). Cultural differences in possible selves during later life. *Journal of Aging Studies, 17*(3), 251-268.
- Wanberg, C. R., & Kammeyer-Mueller, J. D. (2000). Predictors and outcomes of proactivity in the socialization process. *Journal of Applied Psychology, 85*(3), 373-385.
- Waterman, A. S. (1993). Two conceptions of happiness: Contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment. *Journal of Personality and Social Psychology, 64*, 678-691.
- Waterman, A. S. (2007). Doing well: The relationship of identity status to three conceptions of well-being. *Identity, 7*(4), 289-307.
- Watson, D., & Clark, L. A. (1984). Negative affectivity: The disposition to experience aversive emotional states. *Psychological Bulletin, 98*, 219-235.

- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063-1070.
- Weick, K. E. (1995). *Sensemaking in organisations*. Thousand Oaks, CA: Sage Publications.
- Weick, K. E., & Berlinger, L. R. (1989). Career improvisation in self-designing organizations. In M. B. Arthur, D. T. Hall & B. S. Lawrence (Eds.), *Handbook of career theory* (pp. 313-328). New York: Cambridge University Press.
- Weisband, S., & Kiesler, S. (1996). *Self disclosure on computer forms: Meta analysis and implications*. Paper presented at the Human Factors in Computing Systems Conference.
- Weisz, J. R. (1990). Development of control-related beliefs, goals, and styles in childhood and adolescence: A clinical perspective. In J. Rodin, C. Schooler & K. W. Schaie (Eds.), *Self-directedness: Cause and effects throughout the life course*. Hillsdale, NJ: Lawrence Erlbaum.
- Welbourne, T. M., Johnson, D. E., & Erez, A. (1998). The role-based performance scale: Validity analysis of a theory-based measure. *Academy of Management Journal*, 41(5), 540-555.
- Westefeld, J. S., & Furr, S. R. (1987). Suicide and depression among college students. *Professional Psychology: Research and Practice*, 18(2), 119-123.
- Westermann, R., & Hagen, W. (1986). Error probabilities in educational and psychological research. *Journal of Educational Statistics*, 11(117-146).
- White, R. W. (1955). Motivation reconsidered: The concept of competence. *Psychological Review*, 66(5), 297-333.
- Wicklund, R. A., & Gollwitzer, P. M. (1982). *Symbolic self-Completion*. Hillsdale, NJ: Erlbaum.
- Wilson, T. D., & Gilbert, D. T. (2003). Affective forecasting. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 35, pp. 345-311). New York: Elsevier.
- Wrzesniewski, A., & Dutton, J. E. (2001). Crafting a job: Revisioning employees as active crafters of their work. *Academy Of Management Review*, 26(2), 179-201.

- Yowell, C. M. (2000). Possible selves and future orientation: Exploring the hopes and fears of Latino girls and boys. *Journal of Early Adolescence*, 20(3), 245-280.
- Yukl, G. A., & Latham, G. P. (1978). Interrelationships among employee participation, individual differences, goal difficulty, goal acceptance, goal instrumentality, and performance. *Personnel Psychology*, 31, 305-323.
- Zempel, J. (1999). Selbständigkeit in den neuen Bundesländern. In K. Moser, B. Batinic & J. Zempel (Eds.), *Unternehmerisch erfolgreiches Handeln*. Göttingen: Verlag für angewandte Psychologie.

Appendix A: Measures

Future Work Self narrative

Open ended

We all think about the future to some extent, and we imagine what we could become. We would like to ask you to imagine the future of your work life. Imagine you could travel in time. You travel to the future and can take a look at your future self. Try to go as far ahead into the future as possible, so that you still have a clear image. Imagine what you have hoped for for your future work life has become true. Keep the image in mind. What does your future work self do? What is your future work self like? Please write below in at least 50 words what you imagine.

Strategies for attaining the Future Work Self

Open ended

Please list up to three strategies you have for working towards this possible future, things you do to make it become reality.

Temporal distance of the Future Work Self

Open ended

How far in the future is the scenario you imagined? (in years from now)

Accessibility of the FWS (adapted from King & Smith, 2004)

Scale anchors: "strongly disagree" (1), "disagree" (2), "neither agree nor disagree" (3), "agree" (4), "strongly agree" (5)

1. This future is very easy for me to imagine.
2. The mental picture of this future is very clear.

Importance of the FWS (adapted from Norman & Aron, 2003)

Scale anchors: "strongly disagree" (1), "disagree" (2), "neither agree nor disagree" (3), "agree" (4), "strongly agree" (5)

1. It is very important for me to make this future become reality.
2. I would very much like this future to become reality.
3. I plan with this future in mind.

Exclusivity of the FWS

Scale anchors: "strongly disagree" (1), "disagree" (2), "neither agree nor disagree" (3), "agree" (4), "strongly agree" (5)

1. This is only one of many futures I imagine for myself.
2. I see many possible paths for myself in the future.
3. I can imagine many different futures for myself.

Career identity (Carson & Bedeian, 1994)

Scale anchors: "strongly disagree" (1), "disagree" (2), "neither agree nor disagree" (3), "agree" (4), "strongly agree" (5)

1. Having a career in my field is an important part of who I am.
2. This career field has a great deal of personal meaning to me.
3. I strongly identify with my chosen career line.

Future orientation (Strathman, Gleicher, Boninger, & Edwards, 1994)

Scale anchors: "strongly disagree" (1), "disagree" (2), "neither agree nor disagree" (3), "agree" (4), "strongly agree" (5)

1. I consider how things might be in the future, and try to influence those things with my day to day behaviour.
2. Often I engage in a particular behaviour in order to achieve outcomes that may not result for many years.
3. The decisions I make today are based on what I think might happen in the future.

Negative feedback seeking (adapted from Ashford & Tsui, 1991)

Scale anchors: "strongly disagree" (1), "disagree" (2), "neither agree nor disagree" (3), "agree" (4), "strongly agree" (5)

1. I ask my supervisor to be critical when s/he gives me feedback.
2. When I ask my supervisor for feedback, I prefer detailed, critical appraisals even though they might hurt.
3. I ask my supervisor to be honest when s/he gives me feedback.
4. I ask my supervisor for feedback even when I know s/he might disagree with what I have done.

Positive feedback seeking (adapted from Ashford & Tsui, 1991)

Scale anchors: "strongly disagree" (1), "disagree" (2), "neither agree nor disagree" (3), "agree" (4), "strongly agree" (5)

1. When asking my supervisor for feedback, I tend to seek good news about myself.
2. I ask my supervisor for feedback only when I know it will be positive rather than negative.
3. I ask my supervisor for feedback when I know I have done things exactly how s/he would want me to.

Ego protection motive (adapted from Tuckey, Brewer & Williamson, 2002)

Scale anchors: "strongly disagree" (1), "disagree" (2), "neither agree nor disagree" (3), "agree" (4), "strongly agree" (5)

1. It's hard to feel good about myself when I receive negative feedback.
2. I try to avoid negative feedback because it makes me feel bad about myself.
3. I worry about receiving feedback that is likely to be negative because it hurts to be criticized.

Instrumental feedback seeking motive (adapted from Tuckey, Brewer & Williamson, 2002)

Scale anchors: "strongly disagree" (1), "disagree" (2), "neither agree nor disagree" (3), "agree" (4), "strongly agree" (5)

1. It is important to me to obtain useful information about how I am doing.
2. Receiving feedback about my work helps me to improve my skills.
3. Obtaining useful feedback information is very important to me.

Impression management motive (adapted from Tuckey, Brewer & Williamson, 2002)

Scale anchors: "strongly disagree" (1), "disagree" (2), "neither agree nor disagree" (3), "agree" (4), "strongly agree" (5)

1. I ask my supervisor for feedback to appear interested in learning.
2. I ask my supervisor for feedback to show that I want to improve my performance.
3. I ask my supervisor for feedback to show my responsible nature.
4. I seek feedback from my supervisor because I hope this will make a good impression.

Job role negotiation (adapted from Ashford & Black, 1996)

Scale anchors: "strongly disagree" (1), "disagree" (2), "neither agree nor disagree" (3), "agree" (4), "strongly agree" (5)

1. I discuss with my supervisor about what he/she expects from me.
2. I negotiate with my supervisor about the demands placed on me.
3. I negotiate with my supervisor about desirable directions in my PhD.

Positive affect (I-PANAS, Thompson, 2007; shortened from Watson, Clark, & Tellegen, 1988)

Scale anchors: "never" (1), "occasionally" (2), "some of the time" (3), "most of the time" (4), "always" (5)

1. Over the last few weeks, to what extent did you feel alert
2. Over the last few weeks, to what extent did you feel inspired
3. Over the last few weeks, to what extent did you feel determined
4. Over the last few weeks, to what extent did you feel attentive
5. Over the last few weeks, to what extent did you feel active

Negative affect (I-PANAS, Thompson, 2007; shortened from Watson, Clark, & Tellegen, 1988)

Scale anchors: "never" (1), "occasionally" (2), "some of the time" (3), "most of the time" (4), "always" (5)

1. Over the last few weeks, to what extent did you feel afraid
2. Over the last few weeks, to what extent did you feel nervous
3. Over the last few weeks, to what extent did you feel ashamed
4. Over the last few weeks, to what extent did you feel upset
5. Over the last few weeks, to what extent did you feel hostile

Proactive career behaviours/Job mobility preparedness (adapted from Claes and Ruiz-Quintanilla, 1998):

• **Career planning** (adapted from Bachman, O'Maley, & Johnston, 1978)

Scale anchors: "strongly disagree" (1), "disagree" (2), "neither agree nor disagree" (3), "agree" (4), "strongly agree" (5)

1. I engage in career path planning.
2. I am planning what I want to do in the next few years of my career.
3. I am thinking ahead to the next few years and plan what I need to do for my career.

• **Career consultation** (adapted from Bachman, O'Maley, & Johnston, 1978)

Scale anchors: "strongly disagree" (1), "disagree" (2), "neither agree nor disagree" (3), "agree" (4), "strongly agree" (5)

1. I seek advice from my supervisor(s) or colleagues about additional training or experience I need in order to improve my future work prospects.
2. I initiate talks with my supervisor about training or work assignments I need to develop skills that will help my future work chances.
3. I make my supervisor aware of my work aspirations and goals.

• **Proactive skill development** (adapted from Penley & Gould, 1981)

Scale anchors: "strongly disagree" (1), "disagree" (2), "neither agree nor disagree" (3), "agree" (4), "strongly agree" (5)

1. I develop skills which may not be needed so much now, but in future positions.
2. I gain experience in a variety of areas to increase my knowledge and skills.
3. I develop knowledge and skill in tasks critical to my future work life.

• **Networking** (adapted from Penley & Gould, 1981)

Scale anchors: "strongly disagree" (1), "disagree" (2), "neither agree nor disagree" (3), "agree" (4), "strongly agree" (5)

1. I am building a network of contacts or friendships with colleagues to obtain information about how to do my PhD or to determine what is expected of me.
2. I am building a network of contacts or friendships to provide me with help or advice that will further my work chances.
3. I am building a network of colleagues I can call on for support.

Age

Scale: open ended

Gender

Male, Female

Year of study

1, 2, 3, 4, 5, >5

Appendix B: Coding instructions

Instructions for ratings of the Future Work Selves

1) Detail

Participants describe in more or less detail what they imagine for their future selves. They can give details on a variety of aspects:

- different activities a future self engages in (e.g. “I will be teaching”, “I will be working in a hospital”)
- aspects of the work environment or job (e.g. “...in an international organization”, “My job will be very unstructured”),
- attributes/characteristics of the future self (e.g. “My future self will be confident”, “I will be successful/good at my job”),
- attributes/characteristics of co-workers, clients, students, etc. (e.g. “My students are attentive and interested”), or
- evaluations of the job or future life (“I will be happy”, “I will enjoy my job”)

Don't worry too much about being able to determine whether a sentence describes an activity or evaluation etc., the main concern is whether you are getting any new information on the participant's future self.

You will notice that you end up rating very long future selves as more detailed than short ones. This is only natural.

Sometimes there can be a lot of text, but this text does not describe the future self in more detail, but:

- talks about the present (“My PhD is about...”)
- talks about how people think about the future (“However, it is too early for me to think about my next job”, “I don't like to plan ahead for the future”, “This is only what I image and might not become reality”)

These pieces of text are not details of the future self and are not included in detail ratings.

Below are descriptions and 2 examples of each of the 5 categories (very detailed , fairly detailed , moderately detailed , not very detailed , not at all detailed). There will also be a “not applicable”- category for the rare cases where the text provided by the participant is not about the content of what they imagine for their future, but for example about how they felt about writing about their future, or on how they experience their PhD.

- a) A **very detailed future self** includes several of the different aspects listed above, and often includes even more detailed information of each of the aspects (e.g. describes many different activities the future self will engage in or many different attributes the future self will possess). Here is an example of a very detailed future self:

"A clinical psychologist, working mainly with young people. I enjoy my work, and am determined and hard working. My work life is very structured and well organised. I work both in a team and independently. As well as being a practicing clinician I also conduct research into interventions. I am confident and approachable, and a good listener. I am respected in my field."

This person gives details on the sort of activities they will engage in ("*clinical psychologist, working mainly with young people*", "*being a practicing clinician I also conduct research into interventions*"), they describe the characteristics their future self will have ("*determined and hard working*", "*am confident and approachable, and a good listener*"), their success ("*I am respected in my field*"), they give describe the characteristics of their work environment or job ("*My work life is very structured and well organised*"), and they describe how they will feel about their job ("*I enjoy my work*"). There are details on almost all of the categories above (activities, characteristics of the job, evaluations, etc), and frequently there is more than one detail per category (e.g. several characteristics of the future self are named).

- b) A **fairly detailed future self** still includes a number of aspects, but as opposed to a very detailed future work self it does not include further details on the different aspects of the future self. A few aspects are covered in detail. Here are two examples:

"I would like to continue being a researcher and maybe become a lecturer but with the focus still being on research. I would like to have some well respected publications and feel confident that my area of work makes substantial contributions to the wider picture. I would like to be thought of by others in the field as being rigorous, honest and scientific."

This person describes what activities they will engage in ("*being a researcher*", "*become a lecturer but with the focus still being on research*"), and talk about their success at work ("*some well respected publications*", "*my area of work makes substantial contributions to the wider picture*", "*thought of by others in the field as being rigorous, honest and scientific*"). Not all of the possible categories are covered, but there is a great amount of detail on the success of the future self.

"I am an academic, still at Sheffield University, but with links to a lot of other universities, so I spend a lot of time abroad. I am still researching in the area of social psychology and health. My work life is very busy but I have mastered the art of time management and so am able to effectively divide my time between my teaching and research activities, whilst at the same time having enough time to play an active role in bringing up my children. This is my ideal situation anyway."

This person describes numerous different activities they will engage in ("*am an academic*", "*spend a lot of time abroad*", "*I am still researching in the area of social psychology and health*", "*divide my time between my teaching and research activities*", "*play an active role in bringing up my children*"), and mention their work environment ("*still at Sheffield University*").

- c) A **moderately detailed future self** includes details on at least some of the aspects of the future self, but none of them are described in **great** detail, or it focuses on one single aspect (e.g., the different activities the future self will engage in) and goes into some detail. Here are some examples:

"I am lecturing in an established university with a good reputation. I am confident and know what I am talking about. My students are attentive and interested. I am happy with all aspects of my life."

This participant gives details on their work environment ("an established university with a good reputation"), the attributes of their future self ("I am confident and know what I am talking about"), their participants ("My students are attentive and interested"), and how they will feel about their future life (evaluation) ("I am happy with all aspects of my life").

"I imagine that I'm working in the public sector, preferably public health and helping to inform policy. I will be hard-working, committed, passionate about what I do and diligent. However, I will not sacrifice my family life to give all my energy to work."

This participant gives details on their job ("working in the public sector, preferably public health"). The attributes of their future self ("I will be hard-working, committed, passionate about what I do and diligent") mainly center around one theme, and each of the adjectives does not introduce a huge amount of new information. "I will not sacrifice my family life to give all my energy to work", although negatively worded, can be seen as an activity, i.e. prioritizing family life over work.

- d) A **not very detailed future self** only mentions one or two details of the future self/life.

"I would like to work as a project manager in an international organization and be in charge of a large number of people."

"I envision myself working in a clinical research setting, treating some clients in a private practice and working in a collaborative research environment."

To get clearer on the difference between a moderately detailed future self and a not very detailed future self compare the second example with the second example of future selves rated 3 above.

- e) A **not at all detailed future self** only gives one single piece of information on their future self. Frequently this is only one word or sentence.

"be happy with myself"

"A researcher"

2) Uncertainty

Participants express more or less certainty about their future self. Some talk about their future self as if they were absolutely certain that this is what the future will be like. Some talk about what maybe and possibly will happen and even tell us explicitly that they are not sure what their future will really be like.

We are only rating how much uncertainty is expressed in the language the participants use, not how uncertain what they describe may really be.

Here is a list of examples of adverbs and expressions that we see as expressing uncertainty:

- hopefully
- ideally; my ideal situation is...
- maybe
- possibly

Here is a list of examples of verbs that we see as expressing uncertainty:

- I would like to
- I wish to, I want to
- I hope (to)
- (My job) may be
- I **would** be working/my job **would** involve... etc (also: I'd, it'd)
- I **could** be working/my job **could** involve... etc

Note: I **will** is not rated as expressing uncertainty

Here are some examples of how participants explicitly tell us that they are uncertain about their future:

- "However, it is too early for me to say whether a job at a university would be an option at all!"
- "I find it difficult to imagine my future"
- "I don't really have any visions of my future career"

Below are descriptions of each of the 5 categories (very uncertain, fairly uncertain, moderately uncertain, not very uncertain, not at all uncertain). There will also be an "not applicable"- category for the rare cases where the text provided by the participant is not about the content of what they imagine for their future, but for example on their perception of the task to write about their future.

- a) A **very uncertain future self**: the participant is not quite sure about what their future could be. Expressions used are: maybe, possibly, I/my job **could**, my future/job may be,... **AND** the participant explicitly mentions being uncertain about their future, having trouble imagining their future self etc.

"I don't have a clear image of my future yet. Maybe I could be a researcher and maybe become a lecturer but with the focus still being on research."

- b) A **fairly uncertain future self**: the participant is not quite sure about what their future could be. Expressions used are: maybe, possibly, I/my job **could**, my future/job may be, **No** explicit mention of being uncertain about their future, having trouble imagining their future self etc.

"I don't have a clear image of my future yet. Maybe I could be a researcher and maybe become a lecturer but with the focus still being on research."

- c) A **moderately uncertain future self**: the participant knows what they would like their future to be like, but they are not entirely sure this will definitely happen. Expressions used are: hopefully, ideally, I would like to/wish to/hope (to)/want... **AND** the participant explicitly mentions being uncertain about their future, having trouble imagining their future self etc.

"I would like to continue being a researcher and maybe become a lecturer but with the focus still being on research. I would like to have some well respected publications and feel confident that my area of work makes substantial contributions to the wider picture. I would like to be thought of by others in the field as being rigorous, honest and scientific. But it's too early for me to say whether this future will really become reality"

- d) A **not very uncertain future self**: the participant knows what they would like their future to be like, but they are not entirely sure this will definitely happen. Expressions used are: hopefully, ideally, I would like to/wish to/hope (to)/want, I hope I will be... **No** explicit mention of being uncertain about their future, having trouble imagining their future self etc.

"I would like to continue being a researcher and maybe become a lecturer but with the focus still being on research. I would like to have some well respected publications and feel confident that my area of work makes substantial contributions to the wider picture. I would like to be thought of by others in the field as being rigorous, honest and scientific"

- e) A **not at all uncertain future self**: the participant talks about the future self like if they knew that this is what will happen. They use verbs like "I will be" or "My future self is" (i.e. use future of present tense), and none of the phrases and words expressing uncertainty are used. (Compare for the use of "will be" in not very uncertain future selves – "I hope I will be" versus "I will be").

In the unlikely case that a not at all uncertain future self additionally explicitly mentions being uncertain about their future, please rate as not very uncertain.

"I will continue being a researcher and become a lecturer but with the focus still being on research. I will have some well respected publications and feel confident that my area of work makes substantial contributions to the wider picture. I will like to be thought of by others in the field as being rigorous, honest and scientific"

"I continue being a researcher. I have some well respected publications and feel confident that my area of work makes substantial contributions to the wider picture. I am thought of by others in the field as being rigorous, honest and scientific"

Frequently, there will be future selves that use mixed language. In that case, please try to identify the most prevalent form.

In some rare cases it is impossible to rate the uncertainty of a future self because it does not contain any verbs or other indications of how certain it is. In this case, please tick “not applicable”. Here are some examples:

“Be happy with myself”

“A researcher”

“good salary and acceptable level of pressure for a high quality life”

3) Specificity

Participants differ in how specific their future self is. Some have a very concrete idea of what job they want to work in, some even know specifically what company or university they want to work at. Others don't have a very concrete future self and only know *what sort of job* they want to work in. Since it can be difficult for us to judge how specific the future self the participant imagines really is, we can only really rate the text they have provided us with.

Below are descriptions of each of the 5 categories (very specific, fairly specific, moderately specific, not very specific, not at all specific).

There will also be a “not applicable”- category for the rare cases where the text provided by the participant is not about the content of what they imagine for their future, but for example on their perception of the task to write about their future.

- a) Participants with a **very specific future self** name the definite job they will take up. They already have a job lined up, return to their old job or keep on working in their current job, which is often the case for part-time participants.
- b) Participants with a **fairly specific future self** name the job/profession/role they will work in and specify the workplace or (type of) location or the research area/area of work.

Examples are:

- *“I am an academic, still at Sheffield University”*
- *“I will be working as a researcher in an English department in a well-respected university”*

In these examples we know both the role or profession (“lecturer”, “academic”, “researcher”) and the location (“Sheffield University”, “an English department in a well-respected university”).

- c) Participants with a **moderately specific future self** name either the job/profession/role they will work in or specify the type of workplace or the exact location or the research area/area of work.

Examples are:

- *“I envision myself working in a clinical research setting”*.
- *“Doing research in a well-co operating team as well as doing some teaching and supervision”*

- d) Participants with a **not very specific future self** only mention the broad field they will be working in (i.e. “academia”, “industry”, “public sector”, “research”) and give no further details on the type of job or the area of work/research or the location or the field of research. They don’t mention what specifically they hope to be doing or where specifically they hope to be doing it.

Examples are:

- *“I would like to stay in academia”*
- *“Not academia. I want to work in industry, maybe in the public sector”.*

- e) Participants with a **not at all specific future self** do not mention a job/profession/role, workplace, location, or area of research/work at all.

Examples are:

- *“be happy with myself”*
- *“doing a job I enjoy”*
- *“I will have a good job that enables me to have the lifestyle that I require”*
- *“I am working flexibly on creative work that I like”*

Sometimes no specific job or profession is mentioned, but the described activities clearly **imply an identifiable profession**. For example, *“I will have many publications and be successful and respected in my field”* clearly gives indicates that the participant is hoping to become a researcher. If the future self does not explicitly mention the profession but it is obvious which profession the participant refers to, we can treat this future self as if a profession was mentioned.

4) Things to avoid

Sometimes participants **explicitly** mention something they do NOT want their future self to do or their future to be like. Watch out for “**NOT**”.

Examples are:

- *“I will not only work in the lab”*
- *“Work does not rule my life”*
- *“I would like to be a researcher, not really a lecturer as there is too much paper work”*
- *“I will be at a good uni, in an amazing place, not in the UK”*
- *“I will not have to worry about financial side of things”*
- *“I would not want to work in academia”*

If you find **at least one** expression that indicates something the participant would like to avoid becoming or doing, please tick the box, and copy and paste the expression in the textbox.

Obviously every positive thing someone would like to happen implies they want to avoid the opposite. We only focus on occasions where participants **explicitly** mention the negative thing they want to avoid.

Expressions involving income and pay:

- expressions relating to pay/income such as “I don’t earn much” will not be rated as something to avoid; this expression and similar expressions come up quite frequently; the person does not want to avoid earning much, but that “not much money/pay/ income” is more a general expression
- however, expressions like “I don’t want to worry about money” still count as something to avoid

Coding instructions for the ratings of the strategies

In addition to describing their future self, participants were also asked to list up to 3 strategies they have to make their future self become reality. Next, we identify different themes in these strategies. There can be overlap between the themes, i.e., a strategy can include more than one theme at a time. Some strategies on the other hand don't include any of the themes below.

1) Networking

Tick if the participant **explicitly** mentions networking and maintaining/building relationships and connections/contacts.

Examples are:

- *"Liaising with others in the field from other universities"*
- *"Networking"*
- *"I will make many contacts at conferences and at project meetings"*

2) Developing skills

Tick if the participant explicitly mentions one of the following:

- development and improvement of skills
- gaining knowledge
- gaining experience/expertise
- learning of skills, or
- practising skills

Examples are:

- *"keep willing to learn new things"* (this is an example of a strategy that includes more than one theme. The participant wants to learn new things, but also mentions managing oneself (keep willing to – refers to motivating oneself for learning new things).
- *"Identify deficits in skills and knowledge"*
- *"Gaining more experience in the field"*