Technical Manual

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Introduction

The FutureSelves tool uses the construct of possible selves, which was first promulgated in academia in 1986 (Markus and Nurius, 1986). Since then, it has performed well in applied settings.

The FutureSelves tool has a strong emphasis on what is practical in real world settings – it is designed to reflect the real world constraints that practitioners work in, and the differing contexts and motivations of clients. A reflection of this is its adaptability to the eclectic styles of practitioners.

It does this not by ignoring the expansive body of sound, robust research that tells us what makes a program effective or not, but by integrating it in useful ways. Thus it emphasises, and promotes, the importance of a working alliance between practitioner and client, the value of cognitive approaches, and that short interventions can be as effective as longer ones. It also uses a mix of face-to-face work and technology because of its cost and time effectiveness.

FutureSelves can be applied in a range of settings. These include adult career and general guidance, youth, personal development and life planning, and case management. It is also applicable for organisational development and staff selection. Both the technology part (the computerised questionnaires) and practice approaches are adaptable to reflect the differing requirements of these contexts.

There are, however, common themes that permeate the application of FutureSelves across these applications:

- Focussing on what is unique about the person, rather how they compare against others

- Developing motivation and performance, as well as decision-making.

- Focussing on strengths and well-being, rather than weaknesses and limitations

- Speed and depth: covering a lot of ground quickly.

Chapter 1. Work, Well-being and the Application of Possible Selves

Today work plays a crucial role, not only as a source of income, but also of identity and sense of self for many people. It is often central to peoples' lives, and can affect general life satisfaction (Paullay, Alliger, & Stone-Romero, 1994) and the well-being of surrounding family and peers (Leanna & Feldman, 1992). Thus effective career management seems likely to influence the well being of communities as well as individuals.

Defining careers, and consequently work generally, is difficult because they both share many characteristics with unpaid activities. Leisure activities can include compulsory tasks and can be highly structured. Involvement in sports teams, families, and interest groups can have career or work related features, such as obligations to others, goals other than the activity itself, and irritating tasks (Warr, 1987). Thus concepts such as career and vocation very quickly move beyond boundaries about paid work and cross into family, interests, life themes and other characteristics that define our selves and identity.

Careers imply forward movement, but they are not necessarily about work in a traditional sense of being paid, usually by an employer. Consequently, Future Selves is designed for general as well as career counselling and practice. This approach is reflected in the following quote:

> "The combination and sequence of roles played by a person during the course of a lifetime. These roles include those of child, pupil, or student, leisurite, citizen, worker, spouse, homemaker, parent, and pensioner, positions with associated expectations that are occupied at some time by most people, and other less common roles such as those of criminal, reformer, and lover" (p.282, Super 1980).

Thus the FutureSelves Tool is adaptable for work in schools, in relationships, in prisons, and for those in retirement. However, this technical manual focuses on work and well being because they provide general formats to discuss the work of many practitioners in the human relations area.

The "New World of Work"

Recent years have seen the development of considerable theory and rhetoric about careers changing as a new world of work evolves. This new world uses temporary contract workers more, and encourages a greater emphasis on individuals being loyal to their career rather than any particular occupation (Mallon, 1999). Although the degree to which these changes in the nature of careers occurring is debatable, with some querying the balance of rhetoric over reality, there do seem to be strong themes developing around both the loss of security from having a "job for life", and increased choice and expectations from employees (Arthur & Tharenou, 1997).

Mallon points out that popular media reports about changing careers respectively emphasise such changes as either liberating because they provide more choice or threatening because they remove security. Differences in emphases seem likely to depend on the economic power, values and demographics of readers and writers. Mallon also points out that this new constantly changing career creates uncertainty, is disturbing to some people, and that individuals still seek a sense of order to be able to explain how things come to occur. They are also likely to seek to be able to act on their environment, to provide themselves with a sense of direction.

The time span in which career issues are relevant is widening. Expected working ages are generally between 16 (the normal school leaving age, Maani, 2000) and 65 (the age of eligibility for state pensions, Retirement Commission, 2001), meaning that most adults will pass the mid point of their working life at age 41. Between the years of twenty-five and sixty, adults are likely to have completed entry to the work force, and are likely to have to integrate changes in their work with changes in themselves and other life domains. But they are not yet likely to be ready for retirement. This very wide age band suggests career issues are likely to be recurring, diverse, and important in their nature.

Recent Economic and Social Change

Economic change seems likely to increase the need for active career and motivated management. Newer industries tend to absorb younger rather than older workers, meaning that being established in a career does not guarantee continuing employment and can lead to eventual marginalisation if a person is stuck in a declining industry (Davies, Mathews & Wong, 1991). Changes in the skill requirements of employers mean established, older employees risk skill obsolescence if they have not adapted (Landy, 1989).

Career experiences are more likely to be broken by phases of exit, re-entry, and shifts that are sideways and in new fields, rather than necessarily linear within one field (Henretta,

1994). This creates opportunities, but it also costs money and creates uncertainty. With more stable career and life course paths breaking down, the interplay between career, personal and family development seems likely to become increasingly dynamic, idiosyncratic and unpredictable (Riley et al.).

The Relationship Between Work and Well-Being

Academic reviews of the psychology of well-being, positive functioning or some similar term often start by commenting that positive psychology has been neglected to the benefit of research on mental illness or other aspects of poor functioning (e.g. Ryff, 1995; Pavot & Diener, 1993; Burger, 1993). Seligman & Csikszentmihalyi (2000) extend this argument by pointing out that the prevailing focus on the psychology of poor functioning has characterised individuals as fragile passive recipients of stimuli, easily damaged and unable to select and act on environments. However the well-being field is in fact very large, although it is fractured across the developmental and humanist literatures. It has also not been usefully applied (Ryff & Keyes, 1995).

Within the well-being field there are a number of differing and related constructs that range from summary, global estimates of one's life, through to multiple factor taxonomies. At the global, summary end of the spectrum are life satisfaction and subjective well-being (Diener, 1984; Diener & Diener, 1995). More detailed and complex taxonomies operate under the titles well-being (Ryff, 1995) and mental health (Warr, 1987). Within the humanist literature, related constructs include self-actualisation (Maslow, 1954), Roger's (1961) concept of the fully functioning person and Csikszentmihalyi's (1990) concept of optimal experience. Within developmental psychology Erikson's (1959) depiction of developmental tasks and Levinson's (1978) concept of life stages and 'the dream' are two examples of writings that provide insights into how to live life well, as compared to how to understand the aetiology of poor functioning.

Strong themes of well-being appear to be personalised life goals, the ability to act on them and influence the environment, good social support and relationships with others, and satisfaction with oneself. In many circumstances these characteristics imply change and transition in life, because they are the consequences of goals and of influencing the environment, which are in turn characteristics of well-being themselves. This borrows Krumboltz's (1993) point that the goal of career practice should be better life satisfaction, rather than trying to fit changing people into changing jobs. The impact of this on practice is the need to consider a wider diversity of circumstances in which people live (as opposed to a job) and a wider range of self-issues including beliefs, task approach skills and knowledge.

Work provides a medium through which goals can be expressed, the environment can be acted on, social support and friendship can be provided and self-esteem can be maintained. It is also an environment in which developmental tasks are exercised and tested (Levinson, 1978). The absence of these characteristics in the environment (through factors such as job design or culture) or within the person, risk impacting on both career 'achievement' (however defined) and well-being. These characteristics all require agency, because it is through acting on the environment they do or do not come about. Well-being and motivation are therefore critical to the FutureSelves tool. The exercise of these characteristics is likely to be developmental for the self (Csikszentmihalyi, 1988).

Chapter 2. Possible Selves

FutureSelves is an applied practical application of the possible selves construct. Discussions of the self generally have occurred intermittently in mainstream psychology since William James published Principles of Psychology in 1890 (James, 1950).

The self as entity

Csikszentmihalyi (1988) describes the self as a mediator between genetic and personality inheritances, and the outside world, (including the world of work). The self as an entity has the capacity to act regardless of genetic programming, personality traits, and social norms, by choosing to select experiences and act on itself in a self-reinforcing system. The capacity to have flow experiences is one means of doing so because of the relationships between flow experiences, well-being and development of positive self-images, and belief in one's agency. Goals are the representation of the self's interests, and the ability to select between alternative choices demonstrates this capacity for self-direction (Csikszentmihalyi, 1988).

Selves as Multiple and Dynamic rather than Singular and Stable

Logically, if the self is capable of autonomous choice and action, then it is likely to be idiosyncratic in its choices rather than representative of norms. If the self responds to the environment in ways that cause it to change, it is dynamic, and if it responds in different ways to different environments, it is multifaceted (Markus & Wurf, 1987). Thus modern self- theory recognises that while people may have stable personalities and enduring patterns of behaviour, people also adopt different identities and roles in different situations. People do not behave consistently regardless of context. If selves are motivating forces, they are also likely to include outcome expectancies and goals, and therefore they vary in tense. Thus there are past, present and future selves (the latter also described as possible selves).
There are multiple selves, and the self is active. The self can also determine how we think, what we remember and how we feel. Consequently it can determine how we act.

Selves vary in their salience, centrality and valence (Greenwald & Pratkanis, 1980). Self-representations that are core are most easily accessible, have well-developed and elaborated schemas attached to them, and are most important to overall identity. They may also be harder to change, and are likely to relate to major roles or life domains. Other selves that are peripheral are likely to be harder to access, depending on social conditions, affective and motivational states (Markus & Nurius, 1986).

The schema attached to selves includes both the content and process of how we think. Thus selves are not isolated identities to be worn like a cloak, but reflect deeper cognitive, affective and memory processes. Schema influence what information is noticed (allowed into consciousness), how it is processed (including attributions, personal constructs and inferences), and how goals are subsequently set (Markus & Nurius, 1986).

Schemas that are currently activated through selves are defined as being in the working self-concept (Markus & Nurius, 1986). What is present in the working self-concept has a closer bearing on behaviour than more general attitudes and behaviours, because of its immediate relevance to the situation. This dynamic multifaceted view of the self allows for more fine-grained explanation of behaviour, because it focuses on the unique person in their detailed context (Markus & Nurius).

Although schema and self-representations are constantly changing, modern self-theory does not portray people as necessarily unstable or lacking in consistency. Schemas and self-representations are constructed from past experience, and reflect what is most important and valued by a person. They also reflect genetic inheritances (Vondracek et al., 1986). Thus they have a strong link with developmental contextualist views of development.

Activating one self can also lead to activation of other related selves. The nature and strength of interactions between associated selves is reinforced and strengthened with use, and new ones can evolve from already-established ones (Markus & Wurf, 1987). Thus the activation and exercise of selves and schemas dynamically strengthens, and creates, aspects of the self. Unused selves presumably lose their valence and centrality. Self- conceptions tend to change by order, timing, duration, affect and integration across the life span (Cross & Markus, 1991).

Selves include past selves (i.e. the selves I used to have), the present tense (the selves I have now) and the future tense (the selves I might become). These latter selves are known as possible selves. Possible selves have several benefits for career development. They are future-oriented, linked to personal growth and motivation, aid performance, provide resistance to setbacks, capture idiosyncrasy and the unique person in context. They may help address many of the issues currently facing career development interventions.

Possible Selves

Possible selves are the images, senses and thoughts relating to a person's self in the future (Markus & Nurius, 1986). They are schematic cognitive representations of what people expect, hope or fear that they may become, and thus are guided strongly by expectancies about outcomes. Possible selves are not anarchic unrelated identities, but rather draw on past selves that both guide and constrain the capacity for change. Possible selves are

constructed from influences such as family, media and past experiences that have been categorised and used as a basis for judgements about the self (Markus & Wurf, 1987).

Possible selves first appeared prominently in the literature in the mid 1980s (cf. Markus and Nurius, 1986). The historical antecedents of possible selves include Rogers' (1961) depiction of personal goals and the fully functioning person, Maslow's (1954) conception of a hierarchy of needs, which act as future goals, and Levinson's (1978) depiction of personalised and idealised 'dreams'. Possible selves can maintain general themes but can alter in response to changes in the life course and other issues of context (Cross & Markus, 1991). Thus a possible self as 'successful' can evolve from a more specific self- representation, such as being a good student, good employee, or a good parent.

Identification of Personal Meanings

The meanings attached to each self are important and are likely to be both personal and based in context (Oyserman & Saltz, 1993). A client-centred constructivist approach allows the personal meanings attached to each self to be identified rather than assumed (Hermansson, 1998).

Links to Culture, Idiosyncrasy and Person in Context

There are cultural differences in self-construal, with a particular emphasis on collective versus individual, and hierarchical versus independent, construals (Markus and Kitayama, 1991). Lips (1995) argues that gender is likely to play a similar role to culture, with women emphasising communion and interpersonal factors more than men. Cultural and gender differences in self-construal have similarities to historical differences in theories of the self. However the real strength of possible selves may not be in its ability to capture cultural stereotypes or trends, but its ability to reflect fine-grained idiosyncratic features of the person. The multifaceted nature of modern self-theory promotes looking at the individual in an idiographic sense (Markus & Nurius, 1986).

Link to Personal Growth, Change and Adaptability

The dynamic nature of possible selves means that they are highly changeable, thus linking with the concept of adaptability (Savickas, 1997). Possible selves allow for self-change through two characteristics. The first is that they are private and need not be justified to others. The second is that they are in the future tense and so need not be dependent on events in the present tense (Markus and Nurius, 1986). Although they are private and changeable, they still have strong links to motivation.

Link to Goals and Motivation

Elaborate personalised images can provide compelling goals to assist motivation. They link strongly to the benefits of goal-setting, through their ability to prioritise resources, allocate cognitive resources, and develop strategies (Kanfer, 1994). Ruvolo and Markus (1992) propose that making possible selves more specific (i.e. vivid and concrete) and a consequence of personal effort enhances motivation by making the end goal more accessible: there is a lesser gap between the desired end state and the current state. In a study of high school students Leondari, Syngollitou & Kiosseoglou (1998) found that students with more elaborate and specific possible selves were more successful academically than others.

In a study of other young students, Day et al. (1994) found making distal possible career selves more active and salient increased the energising function of more proximate related possible selves. Development of an effective possible self-hierarchy seems possible, and also seems likely to aid motivation. Whereas distal selves are good for capturing the benefits of personal intrinsic aspirations (e.g. Ryan & Deci, 2000), more proximal selves are of greater use in evaluating feedback against performance.

Performance and Development

Possible selves also explicitly aid current performance in several ways. First, the elaborate schema attached to positive well-developed possible selves means more effective attention and processing of relevant information, in a similar manner to expert systems. Thus the well-developed schema means faster and more adaptive processing of information, and more effective relevant memory retrieval. Well-elaborated possible selves are likely to include some rehearsal and simulation, which is likely to improve performance (Cross & Markus, 1994).

Possible selves are more likely to contain the end means to realise a particular possible self (Markus & Nurius, 1986). For example, a well developed future self, as a successful doctor is likely to include highly personalised images including a large office, expensive car, pleased parents, and deference from others. The individual is more likely to attend to information linked to this schema, for example to notice advertisements for doctor vacancies, and to connect different relevant strands of information together. In contrast, an aschematic individual is more likely to not attend to medicine related information, let alone effectively process it.

Possible selves provide a framework in which to evaluate the present tense and everyday occurrences. For example, they can provide meaning to mundane or routine jobs. Normally tiresome work chores can have added meaning if they provide a causal pathway to possible selves such as being a good employee or having a successful career. The successful doctor

self is likely to see a series of paths including studying hard, completing university, getting an internship, and entering a speciality.

Developed, elaborate possible selves may also change perspectives on past selves. In one of the few career related applications of possible selves, Hill and Spokane (1995) found that during an intensive career program the number of possible selves increased and became more attractive, while past selves declined in their appeal. It may be that as positive possible selves become more elaborate and influential on cognitions, past selves change their role from being useful benchmarks to refer back to, to being negative points of comparison with future direction.

Resistance to Setbacks

A desired possible self is likely to arouse a positive affective state that improves access to other related possible selves and schema in the event of setbacks. In contrast, aschematic individuals are at risk of greater incompetence, and are also more likely to be put off by set backs, because negative possible selves will be more easily aroused (Cross & Markus, 1994). They are unlikely to recognise their abilities, and are likely to be less effective at anticipating and simulating tasks. They are also likely to lack the intrinsic motivation associated with personalised desired possible selves (Cross & Markus). In contrast, focussing on a positive possible self can be liberating from a negative current now self (Markus & Nurius, 1986).

Conservative self-protecting mechanisms provide further resistance to setbacks. Schemas and selves act to protect the individual from negative information by screening out stimuli that are threatening and by favouring positive information (Greenwald & Pratkanis, 1980). Depressed people lack this self-favouring bias, and may seek out information that confirms negative schemas.

Greenwald and Pratkanis (1980) describe the self-protective mechanism as the 'totalitarian ego', because it resembles the operation of totalitarian states. Opposing information is oppressed or discounted, and when new information is allowed in, it is interpreted in ways that serve to protect the self.

Assistance with Coping with Change Through the Development of Both Harmonised and Differentiated Goals

Possible selves provide means for practitioners to work with their clients to identify techniques for managing change and to focus on personal goals, motivation and personal growth. Persons with more complex self-concepts have more stable moods, and resist negative feedback better, than those who do not (Linville, 1985). Stress in one life area can be compensated for by emphasis on another. Thus having or developing a complex, diverse self-concept appears

to be beneficial. Differentiation helps people cope with life transitions by providing buffers against negative information, and providing other selves to draw on (Linville).

Paradoxically, integration also leads to better goal achievement if the selves are not in conflict with each other and instead are mutually reinforcing (Winell, 1987). Thus there appear to be trade-offs between the risk hedging and side bets implicit in having differentiated multiple selves, in order to cope, and better performance outcomes due to being focussed on fewer, integrated selves (Carver, Reynolds & Scheier, 1994). The ability to selectively integrate and differentiate between domains and other self-aspects may be very important to human functioning.

The Role of Affect

Affect plays three important roles in self-theory. The first role is that affect helps in the allocation and intensity of cognitive and other resources assigned to a stimulus, which can be either arousing or debilitating (Gergen, 1991). The second role stems from its influence on cognition. Affective reactions help assign information to positive or negative classes, in order to guide whether the thought or information should be approached, avoided, or treated in some other way (Tversky & Kahneman, 1974). Affect can also act as a powerfully motivating distal possible self in its own right, such as being happy or depressed, with other more proximal possible selves acting as intermediary motivators (Markus & Nurius, 1986).

Inclusion of Avoidance Goals

Possible selves can contain fears such as 'failure at law school'. Such feared selves provide avoidance goals which, when balanced with relevant hoped-for selves, increase motivational power to both initiate and maintain behaviours in pursuit of hoped selves and avoid feared ones (Oyserman & Markus, 1990).

Strong feared selves are likely to inhibit effective functioning if they are seen as inevitable: i.e. if there are not balancing achievable hoped-for selves. Feared possible selves are likely to reduce performance by interfering with concentration and leading to distracted attention, less clear focus, and negative cognitions and affect (Csikszentmihalyi, 1988).

A Future Orientation and Planfulness

In an analysis of those who had recovered from a life crisis compared to those who had not, current selves were substantially the same, and basically negative (Markus & Nurius, 1986). However, those who had recovered from a life crisis had more optimistic possible selves: they were more likely to report future selves such as happy, lots of friends, satisfied and confident, and to rate these selves as more likely. Thus it was the individual's possible selves that discriminated between recovered and non-recovered, not the present selves.

The implication is that the feelings of mastery that go with positive possible selves provide incentives for effective behaviours (Markus & Nurius, 1986). From a counselling perspective, this means that development of positive futures provides more effective means of improvement than focussing on the now self.

This latter point provides significant advantages for career development, because of its emphasis on the capacity for self-directed personal growth. Another advantage is that possible selves act as incentives for future behaviour because they help interpret and evaluate current views of the self (Markus & Nurius, 1986). They deal with consequences, choice and motivation. Thus their practical advantages in career development are significant.

Possible Selves, Career Development and Well-Being

Possible selves also have a strong fit with emerging trends in career development. They complement the growing emphasis on adaptability because of their changeable nature, and their emphasis on a future orientation, long term perspective and personal action. As they include developmental, self and context issues, they provide a way of operationalising Savickas's (1997) definition of adaptability.

Their changeable nature provides valuable opportunities for self-development, and thus links with the findings of literature by Mitchell and Krumboltz (1996), Vondracek and Kawasaki (1995) and Savickas (1997): i.e. that people are evolving, adaptive beings with a strong capacity for action.

Possible selves also have a strong fit with theories of well-being: possible selves are sufficiently broad to encompass all the Ryff and Keyes (1995) aspects of well-being. Thus they represent the potential to be both processes and outcomes of career development. Some of the clearest relationships are outlined below in Table 1.

Table 1: Comparison Between Well-Being and Possible Selves Theories	
Ryff and Keyes (1995) dimensions of well-being	Related possible self construct
Purpose in life	Personalised goals including values, lifestyle, occupations and affective states
Environmental mastery	Expected selves, inclusion of outcome likelihood and self-efficacy

Table 1: Comparison Between Well-Being and Possible Selves Theories	
Positive relationships	Inclusion of social self
Autonomy	Elaborate personalised goals as motivator rather than norms or social expectations
Personal growth	Changeable nature of possible selves and their ability to motivate
Self-acceptance	Consideration of affect

A focus on end states means that possible selves link closely to the personal distal goals described by Vondracek and Kawasaki (1995). Because they are so personalised, they are also likely to contain judgements of the self-efficacy, outcome expectancies, environmental constraints, personal meanings, attitudes and affect constructs that have such importance in the well-being and career development literatures (cf. Ryff & Keyes, 1995; Bandura, 1986; Vondracek and Kawasaki, 1995).

Thus modern self-theories have strong theoretical applicability to the new career world. They may work better than other models, particularly if research on what contributes to effectiveness of career interventions is drawn on.

The Purpose of the FutureSelves Tool

The FutureSelves tool is designed to address practical weaknesses of existing approaches and the needs stemming from the new world of work. The intervention has a strong focus on practical usefulness in intervention settings.

The intervention was developed in co-operation with practitioners (rather than in theoretical isolation). It draws on other parts of psychology, including well-being, motivation, optimal experience and human factors (through the use of screen design and graphical layout of results).

The intervention is designed to be applicable across a diverse range of clients and circumstances. These include youth (including those at risk), mature adults, those in retirement, and those in particular circumstances such as relationship difficulties, or those experiencing redundancy. The concept is also applicable to organisational settings, as a tool for career development and organisational development.

Adaptability and relevance to a variety of career situations was addressed by facilitation of a whole-of-life approach in career development. This approach reflects the diversity and idiosyncrasy of situations in which interventions occur (Vondracek and Kawasaki, 1995). The intervention includes self-beliefs, emotions, skills, values and interests in career development. It is adaptable to the eclectic approaches that occur in the real world (Hermansson, 1998; Fretz & Simon, 1992). It uses a well-being based approach as part of both process and outcome.

A particular feature of the intervention is the integration of the computerised instrument with the practice. The instrument does not just assess, but also helps develop cognitions, encourage thinking about the future, motivate and assist.

Chapter 3. The effectiveness of the FutureSelves Tool

FutureSelves has been assessed in a number of studies using qualitative and quantitative approaches. A summary of the main studies follows.

A Quasi Experimental Study Using Comfort with Career Direction as a Dependent Variable

In a study using adult career development clients (N=71) the dependent variable of post-counselling comfort was regressed against pre-counselling comfort, dummy coded treatment type and gender. The overall model showed an R^2 of .45, and an adjusted R^2 of .43 $\underline{F}$ (3,68)=18.755 $\underline{p}$<.001. This showed a significant and meaningful relationship between group membership and post intervention comfort, particularly when the influences of gender and pre-counselling comfort were statistically controlled for in the partial correlation.

Table 2: Zero order regression with Comfort as an Outcome*

Independent variable	B	St'd error	Beta (standardised)	Sig.	Zero order correlation	Partial correlation
Group	2.03	.338	.27	.001**	.18	.34
Gender	-.09	.756	-.01	.902	.017	-.02
Baseline comfort	.64	.756	.66	.001**	.62	.66
Constant	4.48			.006*		

* Significant at p.<.05   ** Significant at p.<.001

*The comfort measure used was from the career decision profile (Jones, 1998). Its reliability in the present study was .80 (pre-test) and .84 (post-test), using Cronbach's alpha.

This result is displayed graphically below:

Mean changes in comfort with career direction pre and post a career intervention: Futureselves compared to general career practice.
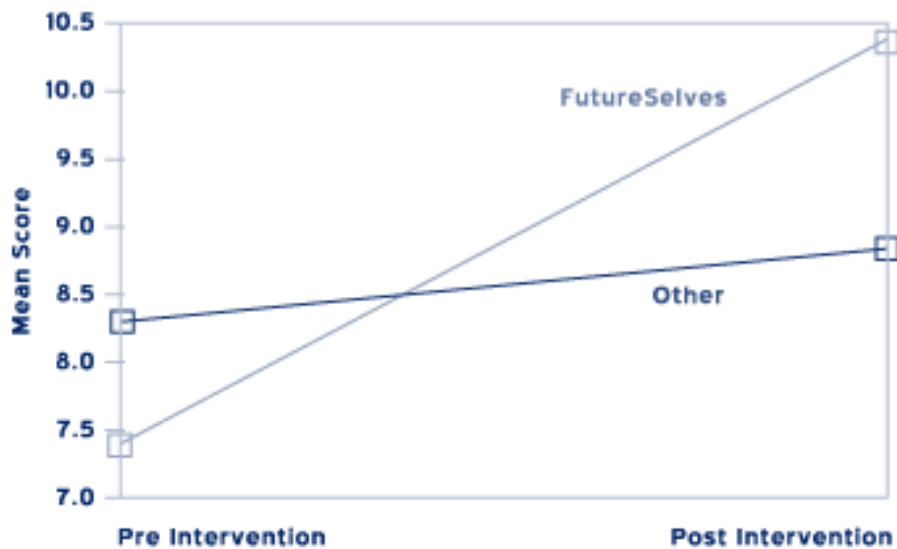
The most significant finding in this study was that the possible selves intervention group had greater increases in comfort with their career choice than did the general counselling group -the partial correlation of .34 shows that when gender and pre intervention comfort are controlled for, FutureSelves group membership accounts for around 12% of the variance in comfort at the end of the first counselling session.

The graph shows that those in the FutureSelves group were less comfortable than those in the comparison group initially, but after the intervention were substantially more comfortable. This suggests that FutureSelves have particular strengths with clients experiencing high anxiety about their career direction.

Seen in this light, the tool may be effective in reducing career anxiety and increasing adaptability, since adaptability is in some ways a reframing of being undecided. An intervention using possible selves may give a clearer view of options and alternatives. It also indicates that the instrument is particularly effective when career and personal issues, indicated by anxiety, are intertwined. An important factor here is that this was achieved after only one session, indicating it is effective in addressing these issues speedily.

Practitioner Experiences in Using FutureSelves

Participants were seven practitioners who had participated in the field study and who responded to telephone or e-mail invitations to be interviewed about their experiences.

Measures and Process

Interview results were coded into the subject topics and then according to themes. Three strong themes emerged. The first was that the instrument was good, and superior to other instruments such as Myers Briggs and the Self Directed Search, at capturing whole of life issues, including emotions, self beliefs and lifestyles that affected career development. One practitioner said:

"It opens up the territory, brings out wider issues, maybe because the computer is good at dealing with personal issues."

Another practitioner said:

"It gave permission for people to talk about their lives"

The reported sources of this strength stemmed from the breadth of the instrument's questioning and the compelling nature of the graphs. Several practitioners commented that the instrument brought out personal issues more quickly than other approaches, and practitioners felt they had a more thorough inventory of possible issues then they would have had, or been able to manage, following a normal practice approach or use of another instrument.

This partly reflected the nature of the items, but there also seemed to be issues around the compelling nature of the graphs and the computer as a neutral listener. One practitioner pointed out that when clients discussed their feedback, they had already engaged in the process through the act of responding to the software. One practitioner sat next to clients when they were using the software:

"Watching people go through is really interesting, watching reactions you get a lot out of it. Particular questions cause consternation."

The second theme was a disadvantage that the tool was not so good at dealing with more narrowly focussed career issues. This theme mainly concerned the items in the work options section, which were seen as "clunky", in that they did not apply to many of the career issues facing clients and the language was inappropriate. One practitioner said the skills and interests were not sufficiently work-related to be useful, and suggested that work competencies be used instead. [These items have since been amended.]

The importance of this distinction between whole-of-life versus narrowly focussed career practice was reflected in the particular client groups of participating practitioners. One practitioner who used it with older adults said that its broad focus quickly brought out the key issues and that career and wider life issues were often inter-related.

A third strong theme was that the intervention was good at identifying barriers in people's lives, particularly through discussion of threats, and to a degree, dreams. This suggested that the intervention lent itself to a cognitive behavioural approach. One practitioner said:

"Very simple things stop people, but obvious solutions come up."

Overall, practitioners reported that clients found the software easy to use; although for one practitioner the "continue" button was too small for some clients to easily see. The narrative section, in which people write their hopes, expectations and fears in their own words, was seen as useful by most practitioners because it brought out what was most important, acted as a warm-up, and made it easier to identify themes that came up in the graphs. There were some comments that people did not write detailed or useful comments in the narrative/free text section.

The graphs are the 'shining star' of the instrument. All the practitioners described them as very useful, and focussed their practice around the responses portrayed on the graph. One said they were challenging to clients, another said they showed a:

"Huge physical gap on the landscape between where they want to be and where they are – they could see the need to move from where they were."

Most practitioners spoke of the tangible nature of the graphs as benefiting clients. However they also spoke of benefits to the practitioner in being able to manage large amounts of information. One said it was:

"Really useful for me - I can see the chunks, corners, where things were at".

Criticisms of the graphs were that occasionally responses over-printed and that the abbreviations of the items were not sufficiently informative. The tables were either not used at all or were used only for clarification when the graphs were unclear.

The degree to which the possible selves program was formally adhered to varied. One practitioner went through the manual thoroughly and reported it as very useful, another hardly referred to it at all. Several practitioners commented that they adapted the tool to their own style, with one adding that it was an advantage being able to do that, as it felt more comfortable. Only one practitioner used specific features of the possible selves tool, such as elaboration. The concept of flow, which was considered in the development of the

intervention, was picked up by several practitioners, with several using the concept as part of their normal work outside the evaluation (Csikszentmihalyi, 1988).

The overall impression gained was that the software questioning and graphs created a future focus. Possible self-related concepts such as setting personalised goals, analysing beliefs, emotions and other schema-related concepts were applied not from declarative adherence to the manual and training, but because they stemmed implicitly from the graphs and normal practitioner practice. A final question sought summative information by asking whether the practitioner would use the intervention again. All but one said yes, but emphasised that it would be used only in situations where personal and career issues were likely to be intermeshed.

Discussion

The strongest finding of this study was support for the tool by the participating practitioners, although its usefulness seemed highest in situations in which career and personal counselling were closely intermeshed.

A surprising finding of this study was that responding to the computerised questionnaire engaged people in the process and consequently speeded up the process of disclosure and practice generally. Reeves and Nass (1996) propose that processes of social cognition apply to people' interaction with computers because innate cognitive processes are poor at distinguishing different sources of social information (i.e. human or computer). In the present case the short but personal and valued practice that sometimes took place may have occurred because insight had begun with responding to the instrument. The implications of this for software design are intriguing. Social and personality psychology may be much more relevant to human computer interaction than has been acknowledged.

The extent of program adherence can be interpreted in two ways. The pessimistic interpretation is that adherence was low because the potential strengths of a possible selves instrument were not recognised. The optimistic interpretation is that much of the adherence to the intervention was done implicitly. The evidence that this latter interpretation may have been correct are, the practitioner comments that the graphs were profoundly influential in the process. The graphs' future focus, and clients' use of them to think about cognitions, emotions and other schema related facets imply that many aspects of the program were in fact followed.

Limitations to this study centre around the self-selected sample and the demand characteristics of having the tool developer conduct the evaluation. The self-selected sample consisted of practitioners who had agreed to participate and were available after the program.

This study has demonstrated the important role of the software in the possible selves program. If the software is directly important in the process, as well as being a recorder and presenter of information, then client experiences of it are more important. Software usability seems likely to affect client responses, particularly if factors such as fatigue set in.

The Effectiveness of FutureSelves in Case Management

This study concerned the application of the FutureSelves tool in a government agency tasked with administering welfare benefits and getting unemployed people into work. Quantitative and qualitative results from both case managers and clients were recorded.

Case Managers' Experiences

Collated responses from the case managers using FutureSelves indicated that, when compared to standard case management, FutureSelves made it easier to identify appropriate goals (n=27, M=1.78, SD=0.51), and to facilitate discussion between case managers and their clients (n=27, M=1.78, SD=0.51). FutureSelves was also seen as a useful addition to client management (n=27; M=1.85, SD=0.46), and was seen as a means of improving the process of working with clients (n=27; M=1.93, SD=0.62). While case managers also agreed that clients supported the results of the back-to-work-plan (n=27, M=2.22, SD=0.85).

Qualitative Results

For case managers the FutureSelves tool was seen as an aid to their management with clients. In particular the FutureSelves tool appeared to make it easier to negotiate a range of work options with clients. The key reason for this identified in focus groups with case managers was the information on clients provided by FutureSelves tool:

"There was stuff in there that would have taken me ages to get from a customer."

"A lot of the time they don't open up to you. The tool (FutureSelves) seemed to get them to talk more."

"The first one I interviewed he had a lot of real issues around working with other people. He preferred to be by himself most of the time. I asked him, 'do you feel uncomfortable talking about all this'. (His reply) 'Just a little bit, it is not like I see you every day'. I then said 'well I'm just here to help you'. Then it went all quiet and the serious stuff came out.............I didn't have to think on the spot as I already had his information."

"My customer Alan (real names of jobseekers not used) wanted to be an actor and I used that book (New Zealand Standard Classification of Jobs) and it went through what he would have to do blah-de-blah (sic.) and how long it would take and I just saw the look on his face.

He wasn't really that committed and he realised he wasn't being that realistic so we looked at different options like joining a drama club you know night classes to start off with. I then wrote that on his work-plan. As for work we got him on to the stadium course and a stadium job."

FutureSelves had an immediate effect on how the case manager interacted with the client. With the information on a client's fears and hopes in front of them case managers appeared to interact more as vocational practitioners rather than benefit officers. Senior management also appreciated the strength of FutureSelves with regards client management. They saw the tool as a means of enhancing consciousness in the organisation around vocational guidance:

"We are getting quantity results. We need to start getting quality results which is where a program like this (Possible Selves) comes in."

The FutureSelves tool appeared to facilitate a move from process and a move toward quality."

Client Responses

Quantitative Results

Clients' reaction to feedback was positive. Clients felt the feedback and work-plan were useful for motivating them into work (n=27, M=1.96, SD=0.65), and would change their job searching behaviours (n=46; M=2.15; SD=0.76). Clients also felt that they were able to participate positively in the process (n=46, M=2.22; SD=0.79). Jobseekers felt that the FutureSelves Tool was a more effective system for building a work-plan than the previous system (n=27; M=1.91, SD=0.66). Differences between groups one and two regarding reactions to case manager feedback were examined with no significant differences found.

Clients found the computer programme easy to use (n=40; M=1.70, SD=0.77), that the length was about right although may have been too long (n=42; M=3.36; SD=0.53), that the print out covered all the areas useful for finding work (n=42; M=2.11, SD=0.76), and that their overall impression of the tool was good (n=42; M=2.02, SD=0.64).

Qualitative Results

For many clients, FutureSelves was the first time they had experienced any intensive assistance from the agency.

"Yeah I had it (career practice) just yesterday (he was refereeing to the Possible Selves tool). That was his first time in three years. It lasted an hour. It was real direct and positive."

Clients also recognised positive effects in terms of their relationship with their case manager:

"From looking at the profile they (case managers) can see what direction they should be working in rather than just trying to figure it out by throwing questions back and forth."

"It brought out things that you usually just thought about yourself. Like that yoga stuff and future plans. Stuff that wouldn't come out unless you were in a study camp."

Chapter 4.   A Comparison of the FutureSelves Program Against an Alternative Career Guidance Methodology and Model.

One of the cheapest, and most commonly used methods for encouraging a person to identify goals for their future is structured brainstorming. Structured Brainstorming, as a subset of introspection, is a key component of many interventions from educational learning (New Zealand Ministry of Education, 2000) through to interventions for the unemployed (cf. Amundson, 1998; Curran, 1998).

The participants were 140 first year Psychology students from Victoria University. Of the sample 47 participants were male, 86 were female with the remainder not disclosing their gender ($\underline{n}$=7). The majority of the sample were under 21 years of age ($\underline{n}$=102), 29 participants were aged 21-35 years of age, 7 participants were aged over 35 years of age, with the remainder not disclosing their age ($\underline{n}$=2).

In all categories the participants using the Possible Selves tool were able to generate more possible selves than by brainstorming. Of the 20 domains of Possible Selves assessed 14 were significantly different in favour of the capacity of the Possible Selves tool as a method of generating more options for participants. This provides support FutureSelves as a superior method for the generation of possible future selves then brainstorming·

The finding was supported when the two groups rotated tasks with group 2 (those now working through the FutureSelves tool) able to consistently generate more additional Possible Selves then their peers from group 1. Again the number of significant results at the $\underline{p}$<0.05 level supports the benefit of the tool in the generation of future options.

Participants did however identify the merit of the output from FutureSelves in terms of assisting in goal generation. This is evident from the summary analysis that was conducted to determine whether participants found FutureSelves to be both a more complete picture of their future aspirations and their overall opinion on whether or not FutureSelves was a better method for generating goals then brainstorming. Participants reported that FutureSelves was a better method of identifying hopes and fears for the future then brainstorming ($\underline{N}$=137, $\underline{M}$=2.4, $\underline{SD}$=0.79; $\underline{Mdn}$ and mode=2). Participants also felt the FutureSelves was a more complete picture of their thoughts on their future ($\underline{N}$=127, $\underline{M}$=3.5, $\underline{SD}$ =0.21, $\underline{Mdn}$ and mode=4).

Chapter 5. Psychometric Properties of the Possible Selves Instrument

Reliability

Two reliability studies have been conducted. The first used a paper and pencil version of the instrument. The second reliability study used the computerised version of the instrument, and data was analysed at the question level to provide information as the instruments overall stability

The first reliability study

Analyses were conducted at the item level in order to measure the stability of self-representations for item selection.

Participants were 92 students taking introductory psychology classes who volunteered to participate. Seventy-seven students completed the inventory. Participant ages were 16-20 (n=61), 21-30 (n=11) and 31-50 years old (n=5). Fifty-six were female and 21 were male. Ethnicity details are Pakeha (n=28), non-disclosures (n=35) and other (n=14).

Although all participants were invited to complete the questionnaire twice over a four-week period, only 34 completed the second questionnaire. Those who did were made up of females (n=27) and males (n=7). The reported age ranges were 16-20 (n=26), 21-30 (n=5), and 31-40 (n=2). Pakeha were the predominant ethnicity (n=27) with the remainder from other groups.

Test Retest Reliability

Test-retest reliability at the item level is sound.

Figure 1: Box Plot Showing Distribution of Hope/Fear Question by Section of Possible Selves Instrument
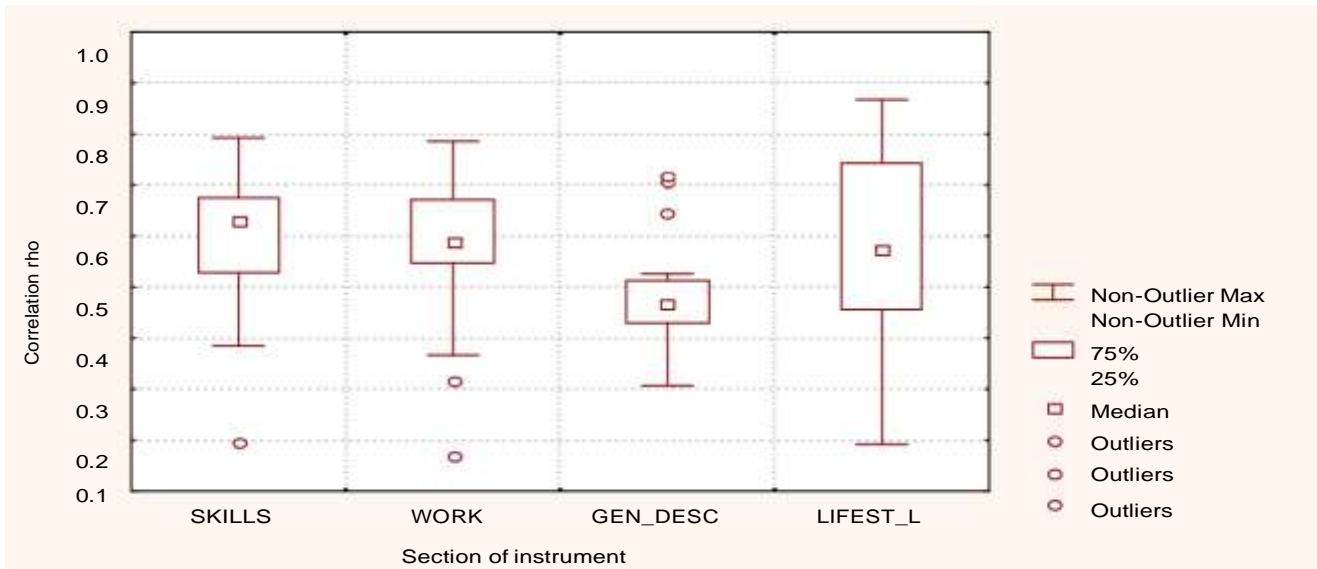
Most correlations were moderate: between .3 and .7. For single item scales, where reliability is usually low, this was considered sufficient. Range restriction caused by the positive bias of participant responses on the scales may have meant that the real level of correlation was attenuated.

The Second Reliability Study

Participants

Participants were students enrolled in an introductory university psychology course who agreed to participate (n=19). Seventy six per cent were aged under 22 with the remainder between 22 and 35. There were 15 females and 4 males. Ethnic categories were European (13), with the remainder identifying with other ethnic groups. The limited number of laboratory computers capable of reliably operating the software limited the available sample.

Participants' data from the first administration of the instrument was matched with the second administration. Responses to each question were then placed into columns containing responses to each question, creating 2458 matched pairs of usable data. Correlations were used to assess reliability at the question level. Results showed generally moderate to high levels of test–retest correlations (Table 4).

Table 4: Test-Retest of Possible Selves Questions (Spearman correlations)	
Test-retest	**r**
How much do you hope or fear this [section] is part of your future	.73
Is this a [section] you have had in the past?	.75
Is this a [section] you have now	.74
What is the likelihood of this [section] being part of your future	.75
All correlations significant at the p. <0.01 level [Using the critical ratio z test]	

The most significant finding of this research was that, at the question level, the instrument had reasonable retest stability. The results were broadly comparable to Markus' (1987) possible selves scale, which measured reliability over the same period of time and had correlations of .72 for positive selves and .89 for negative selves. Possible selves are privately held and need not be strongly related to current reality or present selves. They are explicitly more changeable than other constructs because of this. Logically they are also likely to be less stable. Reliability of the instrument therefore seemed to be adequate.

Concurrent Validity

Comparing it against life satisfaction and optimism pessimism tested concurrent validity.

Regarding life satisfaction, Cross and Markus (1991) found that those low in life satisfaction generated "personal" positive selves most frequently, compared to those high in life satisfaction who more freely reported selves related to occupation, family and other aspects of the social self. It may be that the hoped for personal selves of dissatisfied people represent what is missing from their lives. Less satisfied people also generated more occupation related feared selves. This may reflect the importance of work and career success as both an indicator and causal factor of current overall life satisfaction. Also, a "generalised all inclusive sense of failure was most often expressed by 18-24 year olds scoring low in life satisfaction" (p.249).

Thus conceptions of future success and failure seem linked to current life satisfaction, particularly in an age group when identity is still being developed. However, the Cross and Markus life satisfaction research was exploratory and did not report empirical results. Although the relationship between life satisfaction and possible selves is complex, the

overall relationship should be positive because of links between current and future self-conceptions and evaluations (Markus & Nurius, 1986).

Optimism/pessimism is a dispositional construct with relative stability across time, suggesting it is likely to predict the balance of positive and negative possible selves, rather than the other way around (Scheier & Carver, 1985). Other research stemming from attribution theory describes it as a learned behaviour close to the self-concept, which is changeable through self and professionally administered therapy such as generation of disputations, changed self-talk and other types of attributional reformulations (Seligman, 1991). Markus & Nurius, (1986) found optimism correlated between .41 with possible selves and .51 with probable possible selves.

In an adolescent sample Markus (1987) reports a correlation of .74 between probable possible selves and optimism. Carver, Reynolds and Scheier (1994) built on these findings in a study that showed correlations between optimism and positivity of expected selves of .29. However optimism/pessimism did not correlate with the degree of positivity of hoped for selves or the negativity of feared selves. The overall finding of the Carver et al. research seems to be that optimism/pessimism appears to relate to the expectancies (likelihood) of possible selves being realised – how likely people think it is that positive or negative things will happen to them.

Parallel research on the role of feared selves on pessimists does not appear to have been reported in research. What has been reported is that pessimists report a wider range of hopes across different life domains than do optimists. Carver et al. (1994) suggest this may be explained through Hobfoll's'(1989) conservation of resources theory: that people seek to conserve psychic resources and that loss or threats to such resources are stressful. Consequently people threatened in one life domain protect themselves by spreading resources across other domains.

Resource conservation theory provides an interesting contrast with Linville's (1985) research on possible self-complexity, in which it was found that those with greater possible self-complexity were more resilient to setbacks about future goals. Carver Reynolds and Scheier (1994) found pessimists spread their hoped for selves across multiple domains, and suggests this may be counter productive because resources get spread too thin. Linville suggests, "not putting all ones eggs in one basket" as an effective coping mechanism. Thus what seems to be an effective coping mechanism during life transition (possible selves spread across multiple domains) may hinder performance in the short term (perhaps because of a lack of focus and goal conflict).

Participants

Participants were those who took part in the questionnaire study on software usability. They were 198 students recruited through posters distributed around the university and appeals in undergraduate psychology classes (males =83, females, 114).

The satisfaction with life scale (SWLS) is a short five-item scale with good psychometrics (test-retest of .82 and alphas of .87) and is recommended as an evaluative measure for clinical interventions (Pavot & Diener, 1993).

The measure of optimism/pessimism was the life orientation test (LOT), which is an eight item scale with a reported Cronbach's alpha of .76 (Scheier & Carver, 1985).

The stepwise regression for life satisfaction showed an R^2 of .22 and an adjusted R^2 of .21. $F_{(2,195)}=27.67$ p<. 0001. This showed a low to moderate relationship between general descriptor threats and lifestyle dreams with life satisfaction (Table 5).

Table 5: Life Satisfaction Regressed Against Possible Selves Measures Using Stepwise Procedure With .01 Significance Level as Entry Criteria

Independent variable	B	Beta	Significance
General descriptor threats (fears rated likely to occur)	-.08	-.41	p<.0001
Lifestyle opportunities (hopes rated likely to occur)	.02	.27	p<.0001

A stepwise regression showed an R^2 of .22 and an adjusted R^2 of .21. $F_{(2,195)} = 26.89$ p<.0001. It showed a moderate but negative relationship between general descriptor threats and optimism, and a positive relationship between general descriptor opportunities and optimism (Table 6).

Table 6: Optimism/Pessimism Regressed Against Possible Selves Measures using Stepwise Procedure with .01 Significance Level as Entry Criteria

Independent variable	B	Beta	Significance
General descriptor threats (fears rated likely to occur)	-.03	-.39	p.<.0001
General descriptor opportunities (hopes rated as likely to occur)	.009	.25	p.<.0001

The most striking finding of this study is that all three of the well-being variables had moderate relationships with the possible selves measures. The first hypothesis was that the positive possible self measures, (dreams and opportunities) would correlate positively with the well-being measures, and negative possible selves measures would correlate negatively.

The second hypothesis was that possible self-measures with high likelihood of occurring (opportunities and threats) would have the strongest relationships with the well-being measures. This hypothesis was supported. Expectancies appear to have a strong relationship to current well being.

The third hypothesis was that general descriptors would have the strongest relationships with well-being, because of their relationship to private and affective aspects of the self. This was also supported, with general descriptor threats having the strongest relationship. This finding suggests that personalised and private self-concepts, especially fears considered likely to occur, have a strong relationship to current well-being. In terms of possible selves theory, this relationship is likely to be dynamic and reciprocal.

The negatively worded and neutral items in the general descriptor section, which are likely to have been the threat items, includes terms such as "Alone", "Depressed", "In decline", "Not very bright", and "Lacking in confidence". These items, as they were intended, may represent aspects of the core self-concept and associated affect and schema. They may generalise to, and tap, estimations of life satisfaction and optimism/pessimism. Surprisingly, although the optimism/pessimism construct shares the same future tense as the possible selves construct, it did not have a markedly stronger relationship to general descriptor threats than the other well-being variables. This suggests that future related questions can have as strong a relationship with current self-conceptions as with other future related constructs. Addressing personal, negative and likely future self-conceptions may lead to better present well-being.

Lifestyle dreams seem to have a unique relationship to life satisfaction. Positive or negative items in this section include items like "Having a good partner", and "Secure with life". The fact that these hopes were rated as less than likely to occur suggests that the ability to envision a positive future life plays a role in current satisfaction regardless of expectancy. This finding may represent the predominantly twenty-something and younger age group of the participants. Low estimations of likelihood may represent the uncertain and unformed personal and vocational identities that characterise those age groups, rather than low expectations about life (Super, 1992; Erikson, 1959).

The relationship between general descriptor opportunities and optimism/pessimism suggests that hoped-for and likely selves do relate to optimism. General descriptor opportunities include items such as "Creative", "As a leader" and "Happy". The relationship is likely to be similar to the negative relationships between general descriptor threats on one hand and life satisfaction on the other. The opportunities may represent aspects of the core self-concept and may indicate underlying affect and schema that generalise to the processing of information in the present tense.

The failure of the other possible selves variables to relate to well-being measures is equally revealing. It indicates that those low in the well-being measures have alternative, future related selves to work with, which lend themselves to practice.

From a positive psychology perspective (essentially a non-pathologising model), working with the positive possible selves of clients, even those low in well-being, represents an approach based on people's strengths rather than their weaknesses. Arguably the development and elaboration of personalised opportunities will reduce the salience of feared threats and lead to improved present tense well-being. For example, the relationship between work related opportunities and well-being may be indirect, but stronger work opportunities may reduce the salience of general descriptor threats. In terms of possible selves theory the various possible self measures are likely to be closely related to each other in idiosyncratic ways.

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